

and on the Continent for the study of local movement, not to mention that most valuable of all schemes—the “ringing” of birds,—will go far to building up an edifice grounded on solid facts, whose completion we must leave to future generations of enthusiasts.

Finally, it must be clear to any reader of this rather fragmentary paper that no exhaustive or complete study of the subject has been attempted. Many points connected with the relation between distribution and migration have been merely suggested, in the hopes that such preliminary mention will stimulate ideas on this, the most attractive phase of an absorbing science.

XXII.—*On Birds from South Annam and Cochin China.*

Part I. PHASIANIDÆ—CAMPOPAGIDÆ. By HERBERT C. ROBINSON, M.B.O.U., and C. BODEN KLOSS, M.B.O.U.

(Plates VII.—XI. & Text-figure 3.)

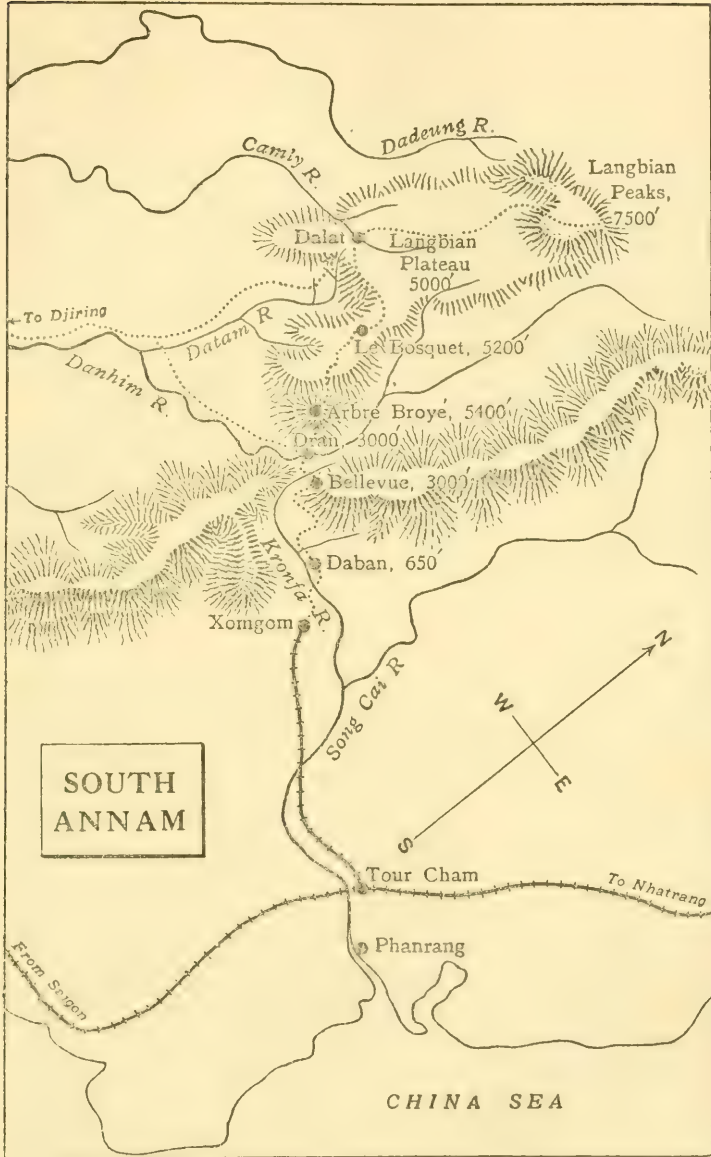
Narrative of the Journey.

By C. BODEN KLOSS.

It is now several years ago since I determined some day to pay a visit to the Langbian region in French Indo-China, partly because it is evidently a most attractive country, little known to English travellers, and partly because there is to be found there that mountain-area, still zoologically unexplored, which is most remote from the fairly well-known upland regions of Burma and Yunnan. I hoped, as the few specimens secured by Mrs. Vassal seemed to indicate and as has proved to be the case, that a rich harvest of novelties would be obtained by the first serious zoological explorer. Early in 1918 my opportunity came with three months' local leave.

The Langbian Plateau (text-figure 3) is situated in southern Annam, and Dalat, the little settlement at its southern side, is about 45 miles distant from Phaurang, a coast town of some local importance in lat. $11^{\circ} 35' N.$, $51^{\circ} W.$

Text-figure 3.



Sketch-map of part of southern Annam to show the localities visited by Mr. Kloss.

After two or three days in Saigon, occupied with local arrangements, I left with three Dyak collectors on 9 March, 1918, in company with my friend Dr. Malcolm Smith, who had come from Bangkok to obtain a change of air and to collect reptiles and batrachians. He brought two native assistants, so that with our boys we were a party of nine and had with us a great quantity of baggage of various kinds—camping-outfit, collecting-apparatus and materials, food, and some warm clothing for the mountains. Late at night we reached Tour Cham, a railway-station some 200 miles from Saigon and four or five inland from Phanrang. The farther north-east we got from Saigon the drier the country and the less luxuriant the vegetation became, until towards the end of the day's journey it was strongly reminiscent of South African scenery.

At Tour Cham we stopped a couple of nights to make arrangements for further progress and do a little collecting; and on my way homewards I remained there from the 19th to the 24th of May for the latter purpose and also to visit Nhatrang farther north along the coast, where there is a famous Cham temple and the Pasteur Institute directed by Dr. Yersin. At Nhatrang had lived also Dr. and Mrs. Vassal, to whom we owe the first knowledge of the fauna of the Langbian Hills. It was the latter's interesting book 'On and off Duty in Annam' which gave me the idea of visiting this region.

In May the dry season was just ending at Tour Cham, and the time was very unfavourable for collecting; the heat (over 90° F. in the shade), after our rapid descent from the cool climate of the mountains, was very oppressive and the country was much burnt up. The cracked earth was covered with short dry grass, grey-brown in colour and slippery to walk on, and was dotted with small, thorny, almost leafless shrubs; the hills in the neighbourhood were rocky and almost bare, and one might best compare the general aspect with some portions of Mashoualand. This is the appearance of the country for some distance south of Phanrang, with, in addition, sand-dunes along the coast.



NEAR TOUR CHAM, PHANRANG, SOUTH ANNAM.



FOREST AT DABAN, 650 ft., PHANRANG, SOUTH ANNAM.



LANGBIAN PEAKS AND PLATEAU, SOUTH ANNAM.



PART OF THE LANGBIAN PLATEAU, SOUTH ANNAM.



CAMP AT DALAT, 5,000 ft., LANGBIAN PLATEAU.



CAMP ON THE LANGBIAN PEAKS AT 6,000 ft.

These are inhabited by enormous numbers of the beautiful lizard *Liolepis beiliana*, which the Annamites trap for food; towards Nhatrang the country improves.

Birds were not numerous in species, of which 29 were obtained, though some were numerous in individuals; such were:—

Turnix pugnax rostrata, *Pycnonotus blanfordi*, *Mixornis rubricapilla connectens*, *Copsychus saularis musicus*, *Crypsirhina varians*, *Buchanga atra cacoetha*, *Sturnia malabarica nemoricola*, *Æthiopsar cristatellus brevipennis*, *Graculipica nigricollis*, *Passer flaveolus*, and *Mirafra assamica marionæ*.

The little Minivet, *Pericrocotus peregrinus*, had been quite common in March, but in May we only succeeded in obtaining two examples.

From Tour Cham the route to Dalat lay in a general north-westerly direction all the way. We left at daybreak on 12 March and travelled by a little branch railway running towards the mountains and terminating after twenty-five miles at Xomgom. I had been rather perturbed by the appearance of Tour Cham, but as we proceeded the vegetation improved until at Xomgom we were in forest: though tropical, it was not equatorial, and it appeared quite open and penetrable after the dense Malayan jungle from which I had just come, as there was no crowded undergrowth.

After some hours' delay and a good deal of walking about under the midday sun, we obtained some bullock-wagons and hand-carts for the baggage and continued onwards for four miles to the Annamite village of Daban, situated within the foot of the mountain-range at a height of 650 ft. Here we pitched our camp on the bank of the Kronfa River, which rises on the plateau of Dran above and enters the sea at Phanrang, and remained there for a fortnight. The early morning temperature was about 65° F., and though in the afternoon it sometimes rose to 90° in the shade this was not unpleasant owing to the dryness of the air.

Birds were fairly numerous, but some of them, like Woodpeckers, were hard to get, as the forest was so open and so carpeted with dead dry leaves, which cracked beneath the

feet, that they would take to flight while beyond gunshot. Along the river there was some green undergrowth, but it was almost deserted; the prevailing colour of the foliage was yellow and pink, but when I came back in May everything was clothed with a beautiful tender green.

We got 102 species here, some of which came from heights up to 1500 ft. Jungle-fowl and the Pheasant, *Diardigallus diardi*, were numerous, as was the Collared Dove; on the hill sides I shot two specimens of the beautiful Pygmy Hawk *Microhierax entolmus*, and the little Owl *Glaucidium cuculoides* sometimes perched in the branches above the camp. A common, but hitherto rarely collected bird was the Great Barbet, *Megalerna lagrandieri*; I got here also *Gecinulus grantia*, which has only once been recorded from French Indo China, *G. erythropygus*, and *Chrysophlegma flavinucha pierrei*. Other interesting occurrences were *Thereiceryx flavostrictus*, *Chloropsis aurifrons inornata*, a new form of *Xanthiscus flavescens*, *Iole olivacea cinnamomeoventris*, *Garrulax moniliger mouhoti*, a new race of *Herpornis xantholeuca*, *Ampeliceps coronatus*, and *Æthopyga siparaja tonkinensis*.

On 29 March I started to transfer my camp some five or six miles uphill, but, owing to an insufficient supply of carriers (Moi men and women from the mountains), two journeys had to be made.

Above Daban the mountains rise steeply, and at 2700 ft. the first pine occurs; at 3000 ft. is reached the edge of the first plateau or shelf in the mountains, and from a spot called Bellevue at the edge a glorious view is obtained down the slopes and across the plain to the coastal hills and the sea. The country at and above 3000 ft. is principally pine-forest (*Pinus Khasya* and *Pinus Merkusii*) and grass-land, but in the gulleys occur stretches of leafy non-coniferous jungle.

With pine-clad hills rising to 4000 ft. close by to the north, from which a few specimens came, we settled down in an empty house in the Annamite village of Suoi-kat, about a mile and a half from Bellevue; but I have labelled all my collections as made at Dran, which is a Government

post about four miles farther west across the level country, because, while the surroundings are similar, it is a much better known place than Suoi-kat, a place-name which also occurs frequently in Annam.

I collected in this pleasant locality and climate on the first occasion from March 29 to April 1, and then, in order to escape as much as possible of the coming wet season at high levels, left for Dalat; but on the return journey we worked this station again from May 9 to 18, when it seemed much warmer and there was almost constant rain from midday to midnight.

Ninety-seven species of birds were obtained altogether, more or less at the 3000 ft. level. A number of them were similar to those collected at Daban; but amongst interesting forms secured at this altitude, many of which were also taken higher up before I came back to Dran and worked it the second time, were *Sphenocercus sphenurus*, *Pitta nepalensis soror*, *Pitta cyanea*, *Volvocivora polioptera*, *Hemixus davisoni*, *Garrulax rassali*, *Pyctorhis sinensis*, *Dryocotaphus ignotus cinnamomeus*, *Henicurus guttatus*, *Calliope calliope*, *Suya crinigera cookei*, *Parus monticolus*, *Sitta nagaensis*, *Chalcopteryx singalensis koratensis*, and new species or races of *Arboricola brunneipectus*, *Pyrotrogon erythrocephalus*, *Cyanops oorti*, *Niltava grandis*, *Garrulax*, *Stactocichla merulinus*, *Pomatorhinus olivaceus*, *Turdinulus epilepidotus*, *Alcippe nepalensis*, *Stachyris nigriceps*, *Siva sordida*, *Cutia nepalensis*, *Pterythius aeralatus*, *Mesia argentaurus*, *Ægithaliscus*, *Loria curvirostris*, and *Æthopyga sanguinepectus*.

Dran is situated on the Danhim River, one of several headwaters of the Donnai, all of which rise near the Langbian Peaks, while the Donnai enters the Saigon River just above that town. From Dran a road of 45 miles runs to Djiring, 3000 ft., which lies about W.S.W. $\frac{1}{2}^{\circ}$ S. and for more than half the way follows the Danhim River, which it crosses at an altitude of about 2700 ft. While at Dalat, Smith and I made a flying trip to Djiring for the purpose of seeing the country. We dropped rapidly down the mountain-side to Prenn at 3000 ft., and after a few miles along the valley of

the Datam River arrived at the Danhim near the junction of the Dran and Dalat roads. From Dran to Djiring the road runs through a broad continuous valley and plateau, undulating very slightly and passing through grass-land, scrub, and many kinds of forest. In the neighbourhood of Djiring, which is a large Moi* centre, there are considerable areas under rice and much scrub-land, apparently the result of former cultivation. Here I picked up three birds not met with elsewhere:—*Caprimulgus macrurus albonotatus*, *Urocissa occipitalis magnirostris*, and *Pavo muticus*.

It is possible that the fauna of this district differs somewhat from that of Dran, and I would recommend it to anyone who contemplates a visit to the Langbian region. Djiring is connected by a good road of fifty miles with the railway near Phantiet: to the north is the mountain of Tao Duong, a fine hill which is quite isolated and appears to be of larger area than the Langbian Peaks and possibly higher; it rises from the plateau of Cagne, 3000 ft., north of the Donnai River, and its foot is within two days' march.

Two routes led from Dran to Dalat, the valley road along the Danhim and Datam Rivers mentioned above, and a second and shorter track ascending immediately from Dran and running in a north-westerly direction over the hills for about twenty-one miles. Along the latter we marched through pines on 2 April, rising in about four miles to 5400 ft. at Arbre Broyé.

At this spot there was a stretch of green mixed forest, and, as I was told later that a species of Pheasant occurred there which I had not obtained, one of my collectors worked the place while I was staying for the second time at Dran, but he failed to secure the Pheasant or any birds we did not meet with elsewhere.

From Arbre Broyé there is a gradual descent, with slight undulations to Le Bosquet, 5200 ft., where we spent the night in a wayside hut for travellers. Here, during the halt on the return journey, about a score of birds were obtained.

* The name given by the Chinese Annamites to the Indonesian aborigines of the mountains.

On 3 April we walked the remaining eight miles into Dalat along a slightly undulating road, and from a hill within two or three miles of the settlement got a splendid view over the heart of the plateau region: in the foreground open pine forest stretching away to the Langbian Peaks to the north, on the left the open grass-covered plateau about eight by five miles in extent with an average altitude of 5000 ft., undulating and nearly surrounded by low wooded hills. Dalat consists of the houses and offices of half a dozen Government officials, a post-office, a little hotel, two or three bungalows, and a small Annamite village.

We camped for ten days in the pine-woods a few hundred yards from the settlement, and on my return from the Peaks I spent a further week (30 April to 6 May) near some mixed forest a short distance beyond the falls of the Camby River, another headwater of the Donnai. The temperature in the early mornings was about 55°, in the afternoon between 70° and 80°; the evenings were so cool that large camp-fires of pine logs were thoroughly enjoyable.

Some of the more interesting birds, not obtained below Dalat, Le Bosquet, and Arbre Broyé, were *Gennæus annamensis*, *Syrnium newārense*, *Digenia submōniliger*, *Muscicapula melanoleuca*, *Pericrocotus griseigularis*, *Stachyridopsis ruficeps*, *Brachypteryx caroline*, *B. nipalensis*, *Malacius desgodinsi*, *Tesia cyaniventris olivæ*, *Geocichla citrina innotata*, *Cichloselys sibiricus*, *Oreocinclu aureus angustirostris*, *Zoothera marginata*; *Turdus obscurus*, *Oreicola ferrea*, *Luscinola luteiventris*, *L. taczanowskia*, *Machlolophus spilonotus*, while new species or subspecies were secured of *Arboricola rufogularis*, *Cyanops franklini*, *Dendrobiastes hyperythra*, *Cryptolopha castaneiceps*, *C. tephrocephala*, *Hemixus tickelli*, *Xanthiscus flavescens*, *Trochalopteron*, *Rimator*, *Paeopygia pusilla*, *Uethia discolor*, and *Æthopyga gouldiæ*.

Altogether 89 species were obtained at heights between 4500 and 5500 ft.

From Dalat we moved across the open plateau on 14 April and made a camp among oak trees of the Langbian Peaks at 6000 ft., where the highest permanent

water was to be found. Pines were scarce in the neighbourhood, and the south-western face of the Peaks, where collections were principally made, was covered with mixed forest with some undergrowth; on the ridges and the Peaks themselves (7500 ft.) occurred pines, oaks, and dense small forest and shrub.

We had a very unpleasant time setting up camp in a severe rain-storm when the hill side was flooded with running water, but for the next week the weather was fine; it changed, however, when Smith left for Bangkok on the 21st, and the remaining week of my stay was made unpleasant by heavy rain regularly after midday. The early morning temperature was about 52° and that of the afternoon 65°; cold winds prevailed at night.

The Langbian massif is not large and there were no hills of equal heights in the neighbourhood, while the area of forest is too small perhaps to shelter many high-level species. The following were, in my experience, confined to heights above 6000 ft., and I do not think that future ornithological visitors will add much to the list:—*Chalcophaps indica*, *Muscicapa strophilata*, *Cochoa viridis*, *Sylviparus modestus*, *Dicaeum ignipectus*, and new species of *Cryptolopha*, *Pseudominla*, and *Cissa*.

Between 5500 ft. and the summit of the Peaks, 7500 ft., a total of fifty-seven species was obtained in a fortnight's sojourn.

From the Peaks I returned to Saigon, stopping to collect again as narrated above, at Dalat, Dran, and Tour Cham.

The Langbian region lies very near the southern extremity of the Annamite mountain-chain, which except for several narrow gaps, the most important of which lie behind Quang-Binh, Quang-Tri, and Cape Varella, maintains a respectable height throughout its course from where it leaves the elevated regions of northern Laos and Yunnan. At several points it rises to over 8000 ft.

Of collecting-grounds known to British ornithologists the plateau perhaps most closely resembles—in its pine and oak forests, bracken, and open grass stretches—the Shan States;

but I found a smaller Shan element in its avifauna than its conditions would lead one to expect. Its investigation has, nevertheless, greatly extended the known range of a considerable number of species, and besides obtaining many new forms it was a great pleasure to discover the farthest south of such typically holarctic birds as the Cross-bill and Tree-creeper.

I did not, as I had hoped, meet with a Bullfinch nor with the wonderful Pheasant *Rheinardius ocellatus*, but I was shown a set of the tail-feathers of the latter, the centre pair seven feet long, which was stated to have come from the mountains behind Nhatrang.

The rainy season at Dalat is from April to October, and this is also the period of most equable temperature. The dry season lasts from mid-November to mid-April, and though the nights are considerably colder than in summer the days are also hotter. In February three or four degrees of frost are sometimes experienced, and in that month and March the diurnal range of temperature may be between 30° and 90° F., whereas in August and September it is between about 50° and 80° F. The winter season is much the pleasanter time for a visit.

It was not originally my intention to do any collecting in Cochin-China, but an opportunity arose after returning to Saigon, as, owing to changes in steamer movements, we were delayed there for a fortnight. When travelling to Annam I had noted an area of high green forest surrounding the station of Trang Bom, some thirty-two miles from Saigon by rail and twelve east of Bienhoa on the Donnai River. Collecting was carried on here from 30 May to 6 June. The forest seemed to cover at most a few square miles of flat land: it consisted of high trees—perhaps the highest met with on the trip—and fairly dense undergrowth, but work was made easy by the existence of many straight rides which had been cut through it.

The avifauna was very different from that of Tour Cham: fifty-one species were obtained, the most interesting being

Tropidoperdix chloropus, *Hypotriorchis severus*, *Megalana lagrandieri*, *Thereiceryx lineatus*, *Dendrocopus analis*, *Chryso-phlegma flavinucha pierrei*, *Graucalus macei siamensis*, *Aegithina lafresnayeii xanthotis*, *Dryonastes chinensis germaini*, *Garrulax moniliger mouhoti*, *Cissa hypoleuca*, and a new form of *Pomatorhinus tickelli*.

Altogether in seventy collecting-days 1525 specimens were obtained, representing 235 species, 34 of which appear to be new. I fear that this excursion will prove to be my ornithological acme, but must consider myself fortunate to have found a district so little known and yet so easily accessible and pleasant to work.

Introduction and List of Literature.

The avifauna of French Indo-China in general, and to an even greater extent that of Annam in particular, has been comparatively little studied by ornithologists, and but little has been written of it even in French journals.

The most important contribution is that of Oustalet, "Les Oiseaux du Cambodge," which includes a full synonymy up to the date at which it was written, but unfortunately only two parts were completed.

The following is a list of the principal publications on the subject:—

OUSTALET, E.—Les Oiseaux du Cambodge, du Laos, de l'Annam et du Tonkin. Part i. *Nouv. Arch. Mus. Paris*, 4th ser. i. 1899, pp. 221–296, pls. ix., x. Part ii. *Ibid.* v. 1903, pp. 1–94, pls. i.–viii.

This work we have quoted for the sake of brevity as "Oustalet."

OGILVIE-GRANT, W. R.—Description of Three new Birds from Annam, collected by Dr. J. J. Vassal. *Bull. Brit. Orn. Club*, xix. 1906, pp. 12–13.

KURODA, N.—A Collection of Birds from Tonkin. *Annot. Zool. Japon.* ix. 1917, pp. 217–254.



ARBORICOLA RUFOGULARIS ANNAMENSIS.

TIRAUT, G.—Les Oiseaux de la Basse Cochin-Chine. Bull. du Comité agricole et industriel de la Cochin-Chine, i. no. 1, 1879.

OUSTALET, E. et MENEGAUX, A.—Catalogue des Oiseaux de la Basse Cochin-Chine. Bull. Soc. Nat. d'Acclim. France, 1905, pp. 169–184; 1907, pp. 43–51, 83–86, 148–154.

The present collection shows that our knowledge of the birds of Indo-China has been, and is certainly still, far from complete, and we have therefore attempted no analysis of the avifauna of the region.

The great majority of those species which are not typically Indo-Chinese (*i. e.* whose true home is east of the Brahmaputra) are distinctly Himalayan. The occurrence of such Malayan species as *Cyanops oorti* is rather a surprise, but in the lowlands certain Malayan birds appear to attain the known limit of their range. We might have expected some of the more typical Chinese forms to have occurred in the Langbian Highlands, but such does not appear to be the case.

List of Species obtained.

1. *Arboricola rufogularis amamensis*, subsp. nov. (Pl. X.)

Most nearly allied to *A. r. rufogularis* Blyth*, from Burma and Tenasserim (type from lower Sikkim), but with the crown almost uniform dark olive-brown, the feathers only very obscurely and narrowly edged with black. Rufous of the chin and upper throat succeeded by a pure white band with narrow black tips to the feathers; this band again separated from the grey of the upper breast by a narrow black band formed by a broad median black bar to the feathers.

Forehead dark grey, lores almost blackish; a narrow grey superciliary stripe with black shaft-stripes to the feathers, broadening and becoming paler on the nape; a narrow white stripe from the nostril to the ear-coverts, the feathers beneath the eye with black tips; ear-coverts ashy brown bordered above with a blackish line, lower cheeks and a

* Journ. Asiat. Soc. Bengal, xviii. 1849, p. 819.

stripe from the gape to the ear-coverts pure white; chin whitish with black tips to the feathers; lower chin and throat and a large patch, brightening on the sides of the neck, rufous chestnut, with clear black tips to the feathers, heavier on the sides of the neck; lower throat pure white with black tips to the feathers; beneath this a narrow black band separating the throat from the underparts. Crown and nape dark bistre slightly squamated with black; mantle, back, rump, and upper tail-coverts lighter, more olive, the rump and tail-coverts with triangular black spots; the mantle obscurely edged with blackish and with fine dark shaft-stripes. Lesser upper wing-coverts olive, outer ones black edged with chestnut on the outer webs and tipped with greyish olive; secondary coverts and tertiaries edged with rich chestnut, a large greyish-olive spot on the outer web and a large black one on the inner web, many of the feathers with clear white shaft-stripes. Primaries brownish black with pale tips, secondaries the same, the outer webs with a chestnut-buff border, the extreme edge lighter, broadening into buffy on the tips. Quill-lining dark grey, outer coverts black, inner greyish white; axillaries greyish white with sooty black bases. Upper breast dark grey, abdomen buffy white; under tail-coverts black, basally barred with ochraceous and with silky white tips; many of the feathers with an ochraceous patch on each web. Flanks grey, the pectoral feathers edged with bistre, the abdominal ones with clear chestnut; most of the feathers with a clear white shaft-stripe broadening towards the tips; thighs greyish tipped with rufous. Tail-feathers above dull bistre vermiculated with black and with a triangular black subterminal patch; beneath dark grey with a black subterminal band and a lighter grey tip. "Iris dull brown, orbital skin and gape dull carmine, feet coral-red, bill black."

Total length 280; wing 142; tail 54; tarsus 38 approx. bill from gape 25 mm.

The adult female does not appear to differ appreciably from the male, but has the upper throat rather white. Soft parts as in the male.

ARBORICOLA BRUNNEPECTUS ALBIGULA.



Total length 270; wing 132; tail 50; tarsus 37·5; bill from gape 24 mm.

4 ♂ ad., 2 ♀ ad. Langbian Peaks, 6-7500 ft., S. Annam. 15-16 April, 1918.

1 ♂ vix ad., 1 ♀ ad. Arbre Broyé, 5400 ft., S. Annam. 15 May, 1918.

3 ♂ ad., 1 ♂ vix ad., 1 ♂ juv., 1 ♀ ad. Dalat, 5000 ft., S. Annam. 12 April-2 May, 1918.

Types. ♂ ♀. Langbian Peaks, 7200 ft. 16 April, 1918.

Males. Total length 280, 290, 285, 280, 285, 290, 285, 282, 285; wing 142, 147, 146, 144, 143, 147, 146, 147, 147, 137; tarsus 38, 41, 39, 41, 39, 41, 41·5, 41, 41, 39, 38·5 mm.

Females. Total length 280, 270, 275, 260; wing 132, 132, 134; tarsus 37·5, 39, 37, 38 mm.

Birds that appear rather less adult have elongated white shaft-stripes on the feathers of the side of the breast: in a half-grown bird with the down still on the throat they are larger and more evenly distributed over the whole of the lower surface.

Arboricola rufogularis, to which this bird is closely allied, has not been recorded from farther east than the hills of the Burmo-Chinese border and in the south from the Muleyit range in Tenasserim.

We have compared this series with a specimen from Toruputu Peak, Daffa Hills (*Godwin-Austen*), and one from Loi San Pa, South Shan States (*Bingham*), and find our birds to differ in the very much greater extent of white on the throat and fore-neck and in the lesser extent of the chestnut of the flanks, which is paler in tint.

2. *Arboricola brunneipectus albigula*, subsp. nov. (Pl. XI.)

Differs from *A. b. brunneipectus* * Tick., of Burma and Tenasserim, in having the forehead and superciliary stripes mingled white and buff and the throat pure white; and from *A. b. henrici* † Oust., of Tonkin and northern Annam,

* Tickell, in Blyth, Journ. Asiat. Soc. Bengal, xxiv. 1855, p. 276.

† Oustalet, Bull. Mus. Paris, ii. 1896, p. 317; Nouv. Arch. Mus. Paris (4) i. 1899, pl. ix.

in the presence of superciliary stripes and the absence of a rufous chin and chestnut forehead.

Adult male. Forehead greyish white tinged with buff and narrowing into a purer white superciliary stripe terminating on the nape in pure white feathers with black tips; lores, a stripe surrounding the eyes, and a patch on the sides of the neck superior to the ear-coverts, and the nape deep black; crown and sinciput also black, the bases of the feathers of the crown olive-brown as the back; back, mantle, rump, and upper tail-coverts olive-brown regularly barred with black; outer wing-coverts olive-grey mottled with black on the outer webs, and washed with chestnut and with large black spots on the inner webs; secondary coverts and tertiaries light olive-grey on the outer webs, the inner webs broadly tipped with black subterminally and tipped and edged with rich chestnut; primaries brownish black, the tips mottled with rufous buff on the outer webs, the secondaries the same, broadly edged with pale chestnut externally; quill-lining grey, the inner coverts whitish, the outer blackish, the axillaries dark grey broadly edged with whitish grey. Chin, lower checks, and upper throat pure white, lower throat sparsely feathered, pure white with terminal guttate black tips to the feathers, ear-coverts whitish tinged with brown posteriorly, chest olive-buff with a reddish tinge more marked on the sides of the breast; middle of the abdomen whitish, flanks greyish olive, each feather with a large ovate white spot subterminally and a black tip; thighs olive-brown; central under tail-coverts with dark fuscous bases and buffy-white tips, the outermost olive-brown on their outer webs barred with black; tail-feathers olive-brown irregularly barred and mottled with black. "Iris brown, bare skin of head and neck red, bill black, feet dull pale coral-pink."

Total length 290; wing 143; tail 50; tarsus 42; bill from gape 26 mm.

1 ♂. Dran, 3000 ft., S. Annam. 11 May, 1918 (Type).

3 ♂ ad., 1 ♀ vix ad. Dran, 3000 ft., S. Annam. 1 April-12 May, 1918.

1 ♂. Arbre Broyé, 5400 ft., S. Annam. 15 May, 1918.

1 ♂. Le Bosquet, 5000 ft., S. Annam. 8 May, 1918.

Males. T. L. 290, 285, 275, 295, 290, 285; W. 143, 135, 138, 143, 145, 138; Ts. 42, 39, 40, 44, 42, 40 mm.

Female. T. L. 272; W. 138; Ts. 38 mm.

The series is fairly uniform; some birds, apparently rather younger, have the sides of the breast less olive, more tinged with rufous, and a greater proportion of olive-brown in the feathers of the crown. The female, which is a good deal younger, has the forehead and supercilia brownish buff.

In its pure white throat free from any tinge of buff it is evident that this form is distinct, though not very markedly so from the typical *A. b. brunneipectus*, which has not been recorded from farther east than north-western Siam. From *A. b. henrici*, if the published description and figure by Oustalet are to be relied on, it is much further removed.

3. *Tropicoperdix chloropus* Tick.

Tropicoperdix chloropus Tick.; Blyth, Journ. Asiat. Soc. Bengal, xxviii. 1859, p. 415; Robinson, Ibis, 1915, p. 721 (S.E. Siam).

1 ♀. Trang Bom, Cochin China. 1 June, 1918.

T. L. 270; W. 143; Ts. 34.

Apparently quite typical.

4. *Francolinus chinensis* (Osbeck).

Ogilvie-Grant, Cat. Birds Brit. Mus. xxii. 1893, p. 136; Kloss, Ibis, 1918, p. 81.

4 ♂, 2 ♀ ad. Dran, 3000 ft., S. Annam. 30 March-14 May, 1918.

1 ♂ ad. Arbre Broyé, 5400 ft., S. Annam. 14 May, 1918.

1 ♂, 1 ♀ ad. Langbian Peaks, 6-7500 ft., S. Annam. 17 April, 1918.

Male. "Iris hazel; bill black; feet ochraceous."

Female. "Iris hazel; maxilla black, sides of base fleshy grey; mandible fleshy grey, tip black; feet deep ochraceous."

Males. T. L. 330, 335, 320, —, 310, —; W. 147, 143, 141, 143, 140, 138; Ts. 38, 38, 38.5, 38, 37, 39 mm.

Females. T. L. 303, 303, —; W. 137, 138, 126; Ts. 37, 39, 37 mm.

5. *Gennæus annamensis* Ogilvie-Grant.

Gennæus annamensis Ogilvie-Grant, Bull. Brit. Orn. Club, xix. 1906, p. 13.

Gennæus nycthemerus annamensis Baker, Journ. Bombay Nat. Hist. Soc. xxiii. 1915, p. 686.

1 ♀ ad. Dalat, 5000 ft., S. Annam. 8 April, 1918.

6 ♂ ad., 6 ♀ ad., 1 ♀ imm., 1 pull. Langbian Peaks, 6-7500 ft., S. Annam. 25-27 April, 1918.

Adult male. "Iris hazel to brown, facial skin etc. blood-red; maxilla blackish, sides at the base greenish horn; mandible dull pale green, blackish at the tip; tarsi cerise, soles dull yellow, claws olive-brown."

Adult female. "Iris bright ochre, hazel, or brown, facial skin blood-red; bill and feet as in male."

Immature female. "Iris dull brown, facial skin dull pale red; maxilla blackish with pale edges; mandible greenish fleshy with olive tip; tarsi and toes pale cerise."

Pull. "Iris grey; bill dull brownish fleshy; feet dull pink."

Males. T. L. 650, 645, 730, 700, 745, 685; W. 225, 240, 235, 240, 225, 240; Ts. 82, 84, 85, 92, 91, 85 mm.

Females. T. L. 560, 560, 620, —, 625, 585, 600; W. 205, 202, 218, 210, 230, 225, 230; Ts. 80, 77, 75, 75, 78, 77, 79 mm.

Greatest length of tail, male 355; female 255 mm.

The males of the above series are all fully adult, though one specimen has the facial wattle less developed than in the others. They are very uniform, the only variation being in the white lines on the inner secondaries, which in two specimens are somewhat wider apart, giving a darker appearance to the upper surface. One specimen has the thighs partially barred black and white, these being entirely black in the other birds.

The adult females from the Langbian Peaks are also very uniform, the only difference being in the tail, which varies considerably in the amount of vermiculation; this is almost absent in some specimens. In the bird from Dalat, however, the vermiculations are very much coarser and there are also oblique buffy black-edged bars. The inner primaries and secondaries are also somewhat coarsely vermiculated with narrow ochreous-buffy bars, black-edged towards their tips; and the upper surface generally is extremely finely vermiculated. Failing further evidence we are, however, unable to accept this bird as representing another form.

A half-grown female from the Langbian Peaks resembles the adults, but has the remains of a younger plumage, of which the feathers of the back are more rufescent, clearly and boldly barred with black and with pale buff tips. Beneath, the centre of the belly is more greyish than in the adults. The throat is dull white and there are two distinct rounded dirty white malar patches.

The chick in down is pale lemon-yellow beneath; head rufous buff; mantle black with rufous tips; thighs rufous externally, lemon-white internally.

Three species of this genus have been described from Annam, viz., the present form, *Gennæus beli* *, from the neighbourhood of Hue, which, as Stuart Baker points out, is very close indeed to the present form, and *Gennæus eāwardsi* †, from Kuang-Tri, slightly farther to the north. The figure of this species [Nouv. Arch. du Muséum, 4th series, Mémoires, vol. i. pl. 10], which seems to have escaped Stuart Baker's notice, shows that it belongs to a totally distinct section of the genus, and that there can be no question of its identity with either of the other forms.

6. *Diardigallus diardi* (Bp.).

Lophura diardi (Bp.); Ogilvie-Grant, Cat. Birds Brit. Mus. xxii. 1893, p. 290; id. Bull. Brit. Orn. Club, xix. 1906, p. 14; Kloss, Ibis, 1918, p. 80.

* Oust. Bull. Mus. Paris, 1898, pp. 258, 261.

† Oust. Bull. Mus. Paris, 1896, p. 316-317.

2 ♂ ad., 1 ♂ vix ad., 3 ♀ vix ad. Daban, 650 ft., S. Annam. 14-15 March, 1918.

1 ♀ ad. Trang Bom, Cochin China. 6 June, 1918.

Adult male. "Iris orange or vermilion, facial skin blood-red, throat-skin deep pink; bill pale horny; tarsi cerise, spurs horny."

Subadult male. "Iris hazel, facial skin blood-red, throat-skin deep pink; bill pale grey with a brown cere; tarsi cerise, spurs horny."

Subadult female. "Iris orange-brown to bright hazel, facial skin blood-red, throat-skin deep pink; maxilla blackish, mandible paler below; tarsi cerise, spurs horny."

The not quite adult males differ from the adult in having the grey of the breast and back less clear and slightly vermiculated with blackish, the shining edges to the feathers of the belly less developed, and the gold of the back with grizzled grey patches similar to the mantle. The fully adult female has the chestnut of the upper and under surface deeper, the lower mantle not vermiculated, the tail darker, more finely vermiculated, while the barred effect which becomes progressively more marked in younger birds shows a tendency to disappear.

Males. T. L. 790, 765, 640; W. 240, 245, 225; Ts. 95, 90, 91 mm.

Females. T. L. 530, 560, 565, —; W. 207, 209, 218, 215; Ts. 75, 78, 78, 76 mm.

Greatest length of tail, male 390; female 240 mm.

7. *Polyplectrum bicalcaratum germaini* Elliot.

Polyplectrum germaini Elliot; O.-Grant, Cat. Birds Brit. Mus. xxii. 1893, p. 357; id. Bull. Brit. Orn. Club, xix. 1906, p. 14; Baker, Journ. Bombay Nat. Hist. Soc. xxiv. 1916, p. 221.

2 ♂ ad. Daban, 650 ft., S. Annam. 16-22 March, 1918.

"Iris brown, orbital skin dull crimson; maxilla horny, mandible fleshy, sides of bill dull pink; feet leaden black."

T. L. 590, 595; W. 220, 195 (worn); T. 325, 335; Ts. 70, 66.

This form seems little more than a subspecies of *P. bicaratum* from the eastern Himalayas, of which *P. b. chinquis* is the Burmese representative.

8. *Gallus gallus* (Linn.).

Kloss, *Ibis*, 1918, p. 81.

1 ♂, 2 ♀. Trang Bom, Cochin China. 1-6 June, 1918.

3 ♂, 2 ♀. Daban, 650 ft., S. Annam. 18-23 March, 1918.

Male. "Iris orange to brown, ear-lappet blush white; maxilla horny brown, mandible horny yellow or brownish grey; feet leaden black."

Males. W. 215, 220, 211, 222 mm.

Females. W. 192, 195, 190, 195 mm.

9. *Pavo muticus* Linn.

Ogilvie-Grant, *Cat. Birds Brit. Mus.* xxii. p. 371.

1 ♀ vix ad. Djuring, 3000 ft., S. Annam. 10 April, 1918.

T. L. 1050; W. 425 mm.

"Lower eyelid greenish, edge of eyelids dull black; bill black, base of lower mandible bluish grey; bare skin surrounding the eyes turquoise tinged with cobalt; lower and posterior bare areas gamboge-yellow finely vermiculated with green; feet black."

Peacocks were seen on the river-banks between Xomgom and Daban.

10. *Turnix pugnax rostrata* Swinh.

Turnix rostrata Swinhoe, *Ibis*, 1865, pp. 542-544.

Turnix pugnax atrogularis Baker (nec Eyton), *Journ. Bombay Nat. Hist. Soc.* xxiii. 1905, p. 405.

2 ♂ ad., 1 ♂ imm., 1 ♀ vix ad. Tour Cham, Phanrang, S. Annam. 20-21 May, 1918.

1 ♀ ad. Dran, 3000 ft., S. Annam. 15 May, 1918.

Male. "Iris yellowish white; maxilla blackish, edges plumbeous; mandible pale plumbeous; feet fleshy grey."

Female. "Iris yellowish white; maxilla pale grey, base

and tip darker; mandible pale grey; feet pale grey blotched yellowish and bluish."

Male. T. L. 150, 155; W. 80, 83; Ts. 21, 23 mm.

Female. T. L. 150, 177; W. 78, 86; Ts. 23, 25 mm.

We have followed Mr. Stuart Baker (*loc. cit.*) in his arrangement of the subspecies of *T. pugnax*, but have not adopted his name of *T. p. atrigularis* for this race. *Hemipodius atrigularis* Eyton was founded on a Malayan specimen, as a reference to the original description (P. Z. S. 1839, p. 107) will show.

Quail were met with in the open grass-land of the Langbian Plateau at 5000 ft., when travelling between Dalat and the Peaks, but none were obtained.

11. *Sphenocercus sphenurus* (Vig.).

Salvad. Cat. Birds Brit. Mus. xxi. p. 8; Oustalet, Bull. Mus. Paris, 1896, p. 185; Stuart Baker, Indian Pigeons and Doves, 1913, p. 80.

1 ♂ ad. Dran, 3000 ft., S. Annam. 31 March, 1918.

1 ♂ ad., 1 ♀ imm. Langbian Peaks, 5-7500 ft., S. Annam. 18-23 April, 1918.

Male. "Iris, inner ring sky-blue, outer pink; bill greyish blue, tip of upper mandible slightly greenish, cere at sides sky-blue; feet cerise, claws yellowish green."

Males. T. L. 303, 300; W. 160, 167; T. 122, 128 mm.

Female. T. L. 265; W. 153; T. 109 mm.

Though these specimens are rather small, we can detect no difference in coloration between them and the descriptions of Salvadori, Blanford, and Stuart Baker. The orange tinge on the forehead is not perceptible, and there is only the faintest trace of orange-pink on the sides of the breast. The maroon-colour of the scapulars does not extend to the mantle. It may here be noted that, contrary to the statements of most authorities, the third primary is distinctly sinuate on the inner web--at any rate, in males.

The species has not previously been recorded from Cochin China. Oustalet (*loc. cit.*) has listed it from the collections of Prince Henri d'Orléans obtained in Yunnan.

12. *Treron curvirostra nipalensis* (Hodgs.).

Treron nipalensis (Hodgs.); Salvad. t. c. p. 34; Baker, Indian Pigeons and Doves, 1913, p. 66, pl. 5.

Treron curvirostra nipalensis Robinson, Ibis, 1915, p. 721; id. Journ. Fed. Malay States Mus. vii. 1917, p. 135; Kloss, Ibis, 1918, p. 82.

1 ♂ ad. Trang Bom, S. Annam. 1 June, 1918.

1 ♂, 1 ♀ ad. Tour Cham, S. Annam. 21 May, 1918.

1 ♂. Dran, 3000 ft., S. Annam. 31 March, 1918.

2 ♂, 2 ♀. Daban, 5000 ft., S. Annam. 14-18 March, 1918.

Male. "Iris ochreous, orbital skin apple-green; bill pale yellowish, base blood-red; feet cerise."

Female. "Iris pinkish yellow, orbital skin pale emerald-green; bill greenish ivory-yellow; cere and feet cerise."

Males. T. L. 270, 277, 275, 275, —; W. 143, 141, 147, 148, — mm.

Females. T. L. 260, 265, 255; W. 143, 143, 138 mm.

These birds are paler and decidedly larger than the Sumatran form *T. c. curvirostra* (Gm.), which, as Stuart Baker correctly points out, is found in Borneo, Sumatra, and the southern extremity of the Malay Peninsula. Birds from the Langkawi and Terutau Islands and Trang, southern peninsular Siam, are intermediate, having the wing about 137 mm. The fulvous tint on the breast is very marked on three out of the five males listed, but not more so than in specimens in the F. M. S. Museums from Terutau I. and from Mapor I. in the Rhio Archipelago, south-east of Singapore.

13. *Ducula insignis griseicapilla* (Wald.).

Carpophaga griseicapilla Salvad. t. c. p. 217; O.-Grant, P. Z. S. 1900, p. 501 (Hainan).

Carpophaga insignis griseicapilla Stuart Baker. Indian Pigeons and Doves, 1913, p. 104, pl. 8.

1 ♂, 1 ♀. Dran, 3000 ft., S. Annam. 29 March, 1918.

3 ♂. Dalat, 5000 ft., S. Annam. 12 April-4 May, 1918.

"Iris white, or pale grey tinged with yellowish, eyelid

black ; bill and cere livid red, tip of upper mandible grey or brownish ; feet livid crimson or purplish crimson."

Males. T. L. 465, 445, 475, 470 ; W. 243, 233, 242, 240 ; T. 196, 192, 196, 205 mm.

Female. T. L. 450 ; W. 228 ; T. 187 mm.

The sexes are similar. These birds are perfectly typical *D. i. griseicapilla*, having the crown pure grey to behind the level of the ear-coverts, sharply defined from the vinaceous nape. Though recorded from Hainan, where it seems to occur intermixed with the true *D. i. insignis* Hodgs., it has not hitherto been noticed in French Indo-China, though Grant records *Ducula badia* from south-west Yunnan (Ibis, 1900, p. 605).

14. *Cenopopelia tranquebarica humilis* (Temm.).

Turtur humilis Salvad. t. c. p. 434.

Cenopopelia tranquebarica humilis Stuart Baker, Indian Pigeons and Doves, 1913, p. 234, pl. 23 ; Kloss, Ibis, 1918, p. 84.

1 ♂ ad. Tour Cham, Phanrang, S. Annam. 22 May, 1918.

1 ♀, 1 ♀ imm. Daban, 650 ft., S. Annam. 22 March, 1918.

2 ♂, 1 ♀ ad. Dran, 3000 ft., S. Annam. 29 March, 1918.

Male. "Iris dark, orbital skin grey, bill and feet black."

Female. "Tarsi purplish black or brownish leaden."

Immature female. "Tarsi dark crimson-brown."

Males. T. L. 240, 245 ; W. 132, 143, 137 mm.

Females. T. L. 230, 235 ; W. 132, 133 mm.

The bird from Tour Cham is slightly paler, less vinaceous beneath than the other specimens.

15. *Streptopelia suratensis tigrina* (Temm.).

Turtur tigrinus Salvad. t. c. p. 440.

Streptopelia suratensis tigrina Stuart Baker, Indian Pigeons and Doves, 1913, p. 121, pl. 11 ; Robinson, Ibis, 1915, p. 724 ; Kloss, Ibis, 1918, p. 83.

1 ♂, 3 ♀ ad. Daban, 650 ft., S. Annam. 14-18 March, 1918.

1 ♀ ad. Dran, 3000 ft., S. Annam. 14 May, 1918.

Male. "Iris pinkish yellow, bill black, feet cerise."

Female. "Iris pinkish yellow, orbital skin grey, maxilla dull grey, mandible black, feet livid red."

Male. T. L. — ; W. 146 mm.

Females. T. L. 300, 307, 314, — ; W. 139, 142, 145, 140 mm.

About the same size as birds from the northern Malay Peninsula, smaller than those from Siam.

16. *Chalcophaps indica* (Linn.).

Chalcophaps indica Salvad. t. c. p. 514 ; Hartert, Nov. Zool. xvii. 1915, p. 195 (Hainan).

4 ♂ imm., 1 ♀ imm. Langbian Peaks, 6-7500 ft., S. Annam. 24-25 April, 1918.

"Iris dark brown, orbital skin dark grey ; bill, tip reddish brown, base purplish brown ; feet livid."

These birds are all immature with remains of the juvenile barred plumage on the under surface and with much rufous chestnut on the wing-coverts.

Total length : males, 235, 240, 240, 245 ; female 230 mm.

17. *Sarcogrammus indicus atrinuchalis* (Jerd.).

Sarcogrammus atrinuchalis (Jerd.) ; Sharpe, Cat. xxiv. 1896, p. 152 ; Robinson, Ibis, 1915, p. 725 ; Kloss, Ibis, 1918, p. 85.

1 ♀ ad. Tour Cham, Phaurang, S. Annam. 20 May, 1918.

"Iris red, eyelid edge and cere red ; bill, tip black, base red ; feet greenish yellowish."

Female. T. L. 313 ; W. 204 ; Ts. 72 mm.

The Wattled Plover was also observed near Dálat at 5000 ft.

18. *Gallinago stenura* (Bp.).

Sharpe, t. c. p. 619.

1 ♂ ad., 1 ♀. Dalat, 5000 ft., S. Annam. 7-12 April, 1918.

T. L. 255, 260 ; W. 123, 129 ; Ts. 30, 34 ; bill from gape. 55, 64 mm.

Snipe were also seen near Dran.

19. *Ardeola grayi* (Sykes).

Kloss, Ibis, 1918, p. 86.

1 ♀. Daban, 650 ft., S. Annam. March 1918.

Wing 205 ; tarsus 54 ; bill from gape 74 mm.

20. *Ardeola bacchus* (Bp.).

1 ♂. Daban, 650 ft., S. Annam. 18 March, 1918.

“Iris lemon, facial skin yellow and olive; maxilla black, base and sides yellow and olive; mandible yellow and olive tipped with black; feet yellowish olive.”

T. L. 520; W. 213; Ts. 57; bill from gape 79 mm.

21. *Dendrocygna javanica* (Horsf.).

Salvad. Cat. xxvii. 1895, p. 156.

1 ♂, 1 ♀ ad. Tour Cham, Phanrang, S. Annam. 23 May 1918.

Male. T. L. 410; W. 183 mm.

Female. T. L. 378; W. 184 mm.

22. *Pseudogyps bengalensis* (Gm.).

Oustalet, p. 229.

1 ♀. Dran, 3000 ft., S. Annam. 16 May, 1918.

“Iris dark, neck grey; bill black, tip of maxilla yellowish grey; feet blackish leaden.”

T. L. 820. Expanse 2000 mm.

23. *Astur badius poliopsis* (Hume).

Oustalet, p. 238; Kloss, Ibis, 1918, p. 87.

Accipiter badius poliopsis Hartert, Nov. Zool. xvii. 1910.

p. 207.

1 ♀ ad. Trang Bom, Cochin China. 5 June, 1918.

3 ♂ ad., 2 ♀ imm. Daban, 650 ft., S. Annam. 21-27 March, 1918.

Male. “Iris pale crimson, cere yellow-olive; bill black, sides at base grey; feet dull yellow.”

Males. T. L. 310, 310, 315; W. 184, 195, 199 mm.

Females. T. L. 340, 340, 350; W. 210, 205 (imm.), 202 (imm.) mm.

Agreeing fairly well with specimens from peninsular Siam and the northern parts of the Malay Peninsula.

24. *Spilornis cheela rutherfordi* (Swinh.).

Hartert, Nov. Zool. xvii. 1910, p. 212; Robinson, Ibis, 1915, p. 729.

1 ♂, 1 ♀ ad. Trang Bom, Cochin China. 5-6 June, 1918.

Male. T. L. 600; W. 423 mm.

Female. T. L. 625; W. 418 (worn) mm.

Without very much larger material than is available it is impossible to discuss the races of Serpent-Eagle inhabiting Indo-China and the Malay Peninsula: at least three and probably four forms appear to occur in the area.

25. *Baza lophotes* (Temm.).

Kloss, Ibis, 1918, p. 88.

1 ♂, 1 ♀. Daban, 650 ft., S. Annam. 13-15 March, 1918.

"Iris dark; bill lavender-grey, tip blackish; feet plumbeous or greenish plumbeous."

Male. T. L. 320; W. 226; crest 47 mm.

Female. T. L. 315; W. 236; crest 55 mm.

The female is apparently not quite adult and has the black patch on the abdomen barred and edged with buffy and the brown bars on the flanks very distinct.

26. *Microhierax eutolmus* (Blyth).

Microhierax carulescens Oustalet, p. 235.

2 ♂ ad. Daban, 650 ft., S. Annam. 18-23 March, 1918.

"Iris brown; bill and cere black, base greenish grey; feet blackish leaden."

T. L. 168, 158; W. 102, 97 mm.

These specimens represent nearly the southern limit of the species; it is not found in Hainan.

27. *Hypotriorchis severus severus* (Horsf.).

Falco severus Horsf.; Blanf. Faun. Brit. Ind., Birds, iii, 1895, p. 123; McGregor, Man. Philipp. Birds, i, 1909, p. 243.

1 ♂ ad., 1 ♂ vix ad., 1 ♀ vix ad. Trang Bom, Cochin China. 1-2 June, 1918.

Male. T. L. 280 (ad.), 275 (vix ad.); W. 218, 217 mm.

Female. T. L. 270; W. 216 mm.

All three specimens are nearly adult, though those we have recorded as hardly so are streaked and spotted with black beneath; the primaries are narrowly tipped and edged

with buffy white, and the tail-feathers barred with rufous buff on their inner webs and tipped with the same colour. The species seems very rare in Malaya and Indo-China. In fifteen years we have never seen a specimen from the Malay Peninsula, though Blyth records it from Malacca, but we have examined a bird obtained by Mr. Williamson near Bangkok. The species in a broad sense has a very wide range eastwards to New Britain. Meyer and Wigglesworth have separated the Indian Peninsula bird as *H. s. indicus*, and Meyer that from south-east New Guinea as *H. s. papuanus*. The typical form was described from Java, and the present birds almost certainly belong to it.

28. *Syrnium newarensis* (Hodgs.).

Syrnium newarensis subsp. (an *caligatus*?) Hartert, Nov. Zool. xvii. 1910, p. 205.

1 ♀ ad. Dalat, 5000 ft., S. Annam. 2 May, 1918.

“Iris dark brown; maxilla dull greenish white, cere tinged with blue; mandible dull greenish white washed with bluish; feet pale bluish blotched with yellowish grey.”

T. L. 530; W. 375 mm.

This specimen has the top of the head, mantle, and inner scapulars and facial ruff deep sooty brown, between “clove” and “bone-brown” of Ridgway, with no tinge of ochraceous; under parts with bars of brown and buffy white, the former rather narrower.

Quite distinct in size and colour from *S. n. maingayi* Hume, of the Malay Peninsula, but apparently agreeing with birds described from Hainan (Hartert, *loc. cit. supra*), except that the lower parts are more broadly barred.

29. *Glaucidium cuculoides cuculoides*.

Gyldenstolpe, Kungl. Sv. Vet.-Akad. Handl. lvi. no. 2, 1916, p. 122; Kloss, Ibis, 1918, p. 89.

Athene cuculoides Oustalet, p. 244.

2 ♂, 2 ♀. Trang Bom, Cochin China. 1-5 June, 1918.

4 ♂, 1 ♀. Daban, 650 ft., S. Annam. 17-18 March, 1918.

Male. "Iris lemon; bill olive-yellow, cere olive; feet pale olive."

Female. "Iris lemon; bill bright yellowish olive; feet dull brownish-yellow olive."

Males. T. L. 204, 205, 220, 215, 220, 227; W. 143, 145, 141, 133, 139, 131 mm.

Females. T. L. 215, 230, 230; W. 143, 138, 146 mm.

The series is fairly constant and shows no approach to the large *G. c. whitleyi* Swinh., of China, or to the rufous *G. c. persimile* Hartert (Nov. Zool. xvii. 1910, p. 205) described from Hainan. We have no access to the description of *Athene cuculoides bruegeli* Parrot, described from Siam. The series from Daban and one female from Cochin China are less rufous on the flanks and greyer on the head, scapulars, and back than the others from Cochin China and two from peninsular and eastern Siam, as noted by Oustalet (*loc. cit.*). The bars on the tail are five to six in number, excluding the basal one and the tip.

30. *Loriculus vernalis* (Sparm.).

Salvad. Cat. xx. 1891, p. 517; Oustalet, p. 227.

1 ♂ ad., 1 ♂ vix ad. Daban, 650 ft., S. Annam. 17-24 March, 1918.

"Iris whitish or pale lemon, maxilla deep orange, mandible pale orange, feet ochreous."

T. L. 146, 142; W. 89, 85 mm.

31. *Palæornis rosa* (Bodd.).

Salvad. Cat. xx. p. 453; Oustalet, p. 224; Kloss, Ibis, 1918, p. 90.

1 ♀ imm. Tour Cham, Phanrang, S. Annam. May 1918.

2 ♂ ad. Daban, 650 ft., S. Annam. 22 March, 1918.

Male. "Iris yellow; maxilla pale orange, cere black; mandible black, or yellow with black edge; feet dark olive-brown."

Males. T. L. 277, 297; W. 135, 138 mm.

Female. T. L. —; W. 131 mm.

The males differ from those collected at Koh Lak, peninsular Siam (Kloss, *l. c. s.*), in being darker green, less

yellowish beneath, and in having the under wing-coverts and axillaries more tinged with verditer-green; they are, however, in very worn plumage. The colour of the mandibles seems variable, as one of the above males and the female have it clear wax-yellow, while in one of the Koh Lak males it is also largely yellow.

32. *Palæornis fasciata* (P. L. S. Müll.).

Salvad. Cat. xx. p. 465; Oustalet, p. 225; Robinson, Ibis, 1915, p. 730; Kloss, Ibis, 1918, p. 90.

1 ♂ ad., 2 ♂ vix ad., 3 ♂ imm., 1 ♀ ad., 1 ♀ imm. Trang Bom, Cochin China. 31 January–14 June, 1918.

3 ♂ ad. Daban, 650 ft., S. Annam. 14 March, 1918.

1 ♂ imm., 1 ♀ ad., 1 ♀ imm. Dalat, 5000 ft., 7–11 April, 1918.

Males. T. L. 330, 330, 360, 363; W. 147, 156, 159, 157 mm.

Females. T. L. 280, 270; W. 148, 156 mm.

“Iris white or pale lemon, cere dull olive; feet pale yellowish olive or dirty green.”

The changes in the colour of the bill appear to be somewhat complicated in this species. Quite young birds of both sexes have both mandibles orange-red; this changes to black in both mandibles in the adult female and also in the semi-adult male, which finally assumes a blood-red upper mandible with a yellow tip when fully adult.

33. *Eurystomus orientalis orientalis* (Linn.).

Sharpe, Cat. xvii. 1892, p. 33; Oustalet, p. 295.

1 ♂, 1 ♀. Trang Bom, Cochin China. 31 May, 1918.

1 ♂, 1 ♀. Daban, 650 ft., S. Annam. 27–28 March, 1918.

1 ♀. Dalat, 5000 ft., S. Annam. 5 May, 1918.

“Iris dark; bill deep orange, extreme tip of maxilla black; feet brownish olive.”

Males. T. L. 285, 295; W. 185, 181 mm.

Females. T. L. 275, 297, 292; W. 192, 189, 190 mm.

The differences between the reputed northern subspecies *E. o. calonyx*, stated to breed in China, and the tropical

resident form *E. o. orientalis*, are sufficiently obvious in these specimens. Before, however, one can feel fully confident that the subspecies have any real existence, it should be demonstrated that no specimens answering to *E. o. orientalis* are ever found north of the Yangtze.

34. *Eurystomus orientalis calonyx* Sharpe.

Gyldenstolpe, Kungl. Sv. Vet.-Akad. Handl. lvi. No. 2, 1916, p. 118.

1 ♂. Trang Bom, Cochin China. 3 June, 1918.

T. L. 288; W. 187 mm.

35. *Coracias affinis* McClell.

Oustalet, p. 296; Kloss, Ibis, 1918, p. 91.

Coracias affinis theresiae Parrot, Verh. Orn. Gesellschaft. Bayern, viii. 1911, p. 97.

1 ♀. Tour Cham, Phaurang, S. Annam. 21 May, 1918.

1 ♀. Dran, 3000 ft., S. Annam. 9 April, 1918.

"Iris dark, bill black, feet brown."

T. L. 320, 320; W. 170, 180 mm.

Parrot has separated the Siamese bird from the typical form on two specimens as being smaller with a wing of 176-178 mm.

A male from Bangkok measures 188 and another from Lat Bua Kao 184, so it appears that no case has as yet been made out for separating this highly migratory bird into races.

36. *Carcineutes pulchellus* (Horsf.).

Sharpe, Cat. xvii. 1892, p. 198; Robinson, Ibis, 1915, p. 732.

2 ♂. Daban, 650 ft., S. Annam. 15-19 March, 1918.

"Iris dark, edge of eyelid and bill blood-red, feet greenish ochre."

T. L. 233, 238; W. 86, 88 mm.

These birds differ from a large series from the Malay Peninsula and Sumatra in having the sides of the breast and flanks a very much paler ochreous buff. They are by far the most easterly specimens recorded.

37. *Halcyon smyrnensis fusca* (Bodd.).

Kloss, Ibis, 1918, p. 92.

Halcyon smyrnensis Sharpe, Cat. xvii. p. 222; Oustalet, p. 288.

1 ♀ imm. Tour Cham, Phanrang, S. Annam. 20 May, 1918.

2 ♀ ad. Daban, 650 ft., S. Annam. 13-14 March, 1918.

1 ♂ ad. Dran, 3000 ft., S. Annam. 18 May, 1918.

Adult. ♂ & ♀. "Iris dark or brown, bill dark blood-red, feet bright blood-red."

Immature. "Bill brown and yellow, feet yellowish washed with brown."

Male. T. L. 277; W. 116 mm.

Females. T. L. 275, 280; W. 113, 113 mm.

38. *Ceryle rudis leucomelanura* (Reichenb.).

Ceryle leucomelanura Reichenb. Handb. Alced. 1851, p. 24. Taf. 409. B, fig. 3488; Hartert, Nov. Zool. xvii. 1910, p. 216.

Ceryle rudis varia Sharpe, Cat. xvii. p. 112; Oustalet, p. 284.

Ceryle rudis leucomelanura, Gyldenstolpe, Kungl. Sv. Vet.-Akad. Handl. lvi. No. 2, 1916, p. 114.

2 ♂ ad. Tour Cham, Phanrang, S. Annam. 23 May, 1918.

T. L. 270, 270; W. 130, 128; T. 73, 67; bill from gape, 72, 69.5 mm.

The bills of these specimens do not appear to be larger than those from Siam. They do not, therefore, belong to the form described as *C. r. insignis* by Hartert (*loc. cit. supra*) from Hainan and presumably China.

39. *Upupa epops longirostris* Jerdon.

Kloss, Ibis, 1918, p. 921.

1 ♀ ad. Daban, 650 ft., S. Annam. 23 March, 1918.

1 ♂ ad. Dalat, 3000 ft., S. Annam. 10 April, 1918.

"Iris dark; bill black, base fleshy; feet deep brownish grey."

Male. T. L. 274; W. 140; bill from gape 65 mm.

Female. T. L. 285 ; W. 135 ; bill from gape 59 mm.

In both specimens the first primary is immaculate and the crest without a subterminal white band.

40. *Melittophagus leschenaulti swinhoei* (Hume).

Melittophagus swinhoei Sharpe. Cat. xvii. p. 55 : Oustalet, p. 292 ; Robinson, Ibis, 1915, p. 734.

Melittophagus leschenaulti swinhoei, Kloss, Ibis, 1918, p. 93.

1 ♀ juv. Tour Cham, Phanrang, S. Annam. 22 May, 1918.

1 ♂, 1 ♀ ad. Daban, 650 ft., S. Annam. 17-27 March, 1918.

1 ♀ ad. Drau, 3000 ft., S. Annam. 11 May, 1918.

"Iris crimson, bill black, feet leaden."

Male. T. L. 215 ; W. 108 mm.

Females. T. L. 215, 212 ; W. 104, 107 mm.

These birds have rather shorter bills than the majority of specimens from Siam and the northern parts of the Malay Peninsula, but the difference is not very constant.

41. *Nyctiornis athertoni* (Jard. & Selby).

Sharpe, Cat. xvii. p. 88 ; Oustalet, p. 294 ; Hartert, Nov. Zool. xvii. 1910, p. 217 (Hainan) ; Kloss, Ibis, 1918, p. 94.

2 ♂ ad. Daban, 650 ft., S. Annam. 14-18 March, 1918.

"Iris yellow ; bill black, base grey ; feet pale olive."

T. L. 350, 345 ; W. 138, 137 ; T. 142, 143 mm.

These specimens show no sign of the shortened tail noted by Hartert in Hainan birds.

42. *Caprimulgus macrurus ambiguus* Hartert.

Caprimulgus macrurus, var *albonotatus* Oustalet, p. 3.

Caprimulgus ambiguus Hartert, Ibis, 1896, p. 373.

Caprimulgus macrurus ambiguus Hartert, Nov. Zool. xvii. 1910, p. 223 ; Robinson, Ibis, 1915, p. 735 ; Kloss, Ibis, 1918, pp. 94-95.

♂ vix ad. Djiring, 3000 ft., S. Annam. 9 April, 1918.

Total length 315 ; W. 207 ; T. 169 mm.

This specimen is considerably larger than any we have

seen from the Malay Peninsula or southern Siam, but is not pale enough to be considered to belong to the western race *C. m. albonotatus*.

43. *Caprimulgus indicus innominatus* Hume.

Caprimulgus innominatus Hume, Stray Feathers, iii. 1875, p. 318, note.

Caprimulgus jotaka O.-Grant, P. Z. S. 1900, p. 486.

Caprimulgus indicus jotaka Hartert, Nov. Zool. xvii. 1910, p. 223; Robinson, Journ. Fed. Malay States Mus. vii. 1917, p. 154-5.

1 ♀ imm. Dran, 3000 ft., S. Annam. 29 March, 1918.

1 ♀. Langbian Peaks, 6-7500 ft., S. Annam. 17 April, 1918.

“Iris dark, bill blackish, feet brown.”

T. L. —; W. 190; T. 128 mm.

In view of these specimens and Grant's remarks on two birds obtained by Whitehead in Hainan, we think that Hume's *C. innominatus*, originally described from Mergui, may fairly be revived for the Indo-Chinese form of this Goatsucker. It will be distinguished from *C. indicus indicus* from the Indian Peninsula and Ceylon by its somewhat larger size, and from *C. indicus jotaka* of Japan and China by darker colouring and smaller size. Not impossibly it is a resident form, as is *C. i. indicus*; while *C. i. jotaka*, which is found in the Malay Peninsula, Borneo, Java, and Sumatra in the winter, is certainly migratory.

44. *Pyrotrogon erythrocephalus annamensis*, subsp. nov.

Adult male. Separable from the typical *P. e. erythrocephalus* (seven specimens from the Malay Peninsula compared) by having the back, rump, and upper tail-coverts more ochraceous brown, not rich rufous chestnut; wing-coverts much coarser and bolder in their vermiculations, almost approaching regular barring. From *P. e. yamakensis* Rickett it is separated by the colour of the head and breast and the normal length of the white tips to the tail-feathers, and from *P. e. flammans* of Sumatra by its larger size. Total length 325; W. 146; T. 175; bill from gape 28 mm.

Adult female. Separable from typical *P. e. erythrocephalus* (seven specimens from the Malay Peninsula compared): by the much more ochraceous, less chestnut-brown head and mantle, and by the bolder and more regular vermiculations of the wing-coverts, the black element present in much larger proportion, the pale element lighter, more ochraceous brown. Total length 320; W. 146; T. 178; bill from gape 28 mm.

1 ♂, 1 ♀ ad. Dran, 3000 ft., S. Annam. 29 March, 1918.
Types of the subspecies.

3 ♀ ad. Langbian Peaks, 55-7500 ft., S. Annam.
23-27 April, 1918.

Male. "Iris scarlet, orbital skin violet; bill—tip, culmen, and edges black, median portion cobalt, gape violet; feet deep fleshy-pink tinged with blue."

Female. "Iris scarlet, hazel-red or pale hazel; bill as in the male; feet pinkish fleshy or dull fleshy."

Male. T. L. 325; W. 146; T. 175 mm.

Females. T. L. 320, 317, 326, 325; W. 146, 141, 148, 143; T. 178, 173, 176, 174 mm.

The character of the wing-coverts, which are of some differential importance in the Trogons, sufficiently distinguish this race from the western typical form.

45. *Pyrotrogon oreskios uniformis* Robinson.

Pyrotrogon oreskios Kloss, Ibis, 1918, p. 97.

Pyrotrogon oreskios uniformis Robinson, Journ. Fed. Malay States Mus. vii. 1917, p. 149.

1 ♂ ad. Daban, 650 ft., S. Annam. 22 March, 1918.

"Iris dark, eyelid cobalt; bill dull cobalt, culmen, tip, and edges black; feet dull pinkish blue."

T. L. 300; W. 124 mm.

This example agrees well with other mainland specimens and differs from typical Javan birds in having the rump entirely uniform, free from any wash of xanthine-orange. (Kloss's paper, though written before Robinson's, was issued later, owing to delay in publication.)

46. *Surniculus lugubris dicruroides* (Hodgs.).

Stresemann, Nov. Zool. xx. 1913, p. 340; Robinson, Journ. Fed. Malay States Mus. vii. 1917, p. 157; Kloss, Ibis, 1918, p. 97.

1 ♂ ad. Dran, 3000 ft., S. Annam. 30 March, 1918.

“Iris dark, bill black, feet leaden.”

T. L. 245; W. 132; T. (middle) 132 mm.

The races of this Drongo-Cuckoo have been dealt with at length in the papers quoted above. The species has not previously been recorded from Annam, though it is known from Hainan and Szechuan.

47. *Hierococcyx sparveroides* (Vig.).

1 ♂. Dran, 3000 ft., S. Annam. 29 March, 1918.

“Iris and eyelids yellow; maxilla black, post-nasal area grey; mandible grey, tip black, gape yellowish; feet yellow.”

T. L. 400; W. 227 mm.

48. *Cuculus micropterus* Gould.

Hartert, Nov. Zool. xvii. 1910, p. 220 (Hainan).

2 ♂ ad. Dran, 3000 ft., S. Annam. 9–11 May, 1918.

“Iris brown; eyelids pale olive, edges broadly yellow; upper mandible black, edges at base yellow; lower mandible yellow, tip greenish, edged with black; feet yellow.”

T. L. 330, 335; W. 204, 207 mm.

49. *Chalcococcyx maculatus* (Gm.).

Ogilvie-Grant, P. Z. S. 1900, p. 484; Robinson & Kloss, Ibis, 1911, p. 41.

1 ♂. Daban, 650 ft., S. Annam. 26 March, 1918.

“Iris dark, edge of eyelid red; bill ochreous, the tip black; feet black.”

T. L. 172; W. 103 mm.

50. *Centropus sinensis intermedius* (Hume).

Stresemann, Nov. Zool. xx. 1913, p. 322; Robinson, Journ. Fed. Malay States Mus. vii. 1917, p. 157; Kloss, Ibis, 1918, p. 100.

1 ♂, 1 ♀ ad. Trang Bom, Cochin China. 31 May–4 June, 1918.

1 ♂ ad. Tour Cham, Phanrang, S. Annam. 22 May, 1918.

1 ♂. Daban, 650 ft., S. Annam. 24 March, 1918.

1 ♀ ad. Dran, 3000 ft., S. Annam. 16 May, 1918.

“ Iris crimson ; bill and feet black.”

Males. T. L. 495*, 465, 480; W. 204*, 185, 207; T. 257*, 243, 260 mm.

Females. T. L. 450, 510; W. 203, 207; T. 265, 268 mm.

51. *Rhopodytes tristis hainanus* Hartert.

Hartert, Nov. Zool. xvii. 1910, p. 218; Robinson, Ibis, 1915, p. 737; Kloss, Ibis, 1918, p. 100.

Rhopodytes tristis Oustalet, p. 274.

3 ♂, 3 ♀ ad. Trang Bom, Cochin China. 1-6 June, 1918.

2 ♂, 2 ♀ ad. Daban, 650 ft., S. Annam. 14-20 March, 1918.

Male. “ Iris crimson, orbital skin and nostrils dull crimson; bill dull apple-green; feet leaden.” *Female.* “ Iris dark.”

Males. T. L. 570, 540, 530, 550, 580; W. 157, 149, 155, 148, 155 mm.

Females. T. L. 570, 550, 520, 595, 560; W. 157, 154, 153, 161, 152 mm.

Oustalet (*loc. cit.*) states that one of the types of *R. t. tristis* Lesson was collected in Cochin China by Diard in 1824, while the other was sent from Bengal by Duvaucel in 1825. Cochin China and Hainan birds are undoubtedly identical, so that if the first-mentioned specimen is taken as the type, it would be necessary to re-name the western bird. To avoid this inconvenience, we here definitely select Bengal as type-locality of *R. t. tristis*.

The above series, when compared with a similar number from Siam and the Malay Peninsula, show a progressive increase in the size of the bill as we proceed west and south, but the difference is not sufficient to constitute an intermediate subspecies. In the southern part of the Malay Peninsula, the bird is strictly confined to high altitudes.

* Probably wrongly sexed.

52. *Cyanops oorti annamensis*, subsp. nov.

Cyanops oorti Oustalet (nec Müll.), p. 248.

Separable at a glance from typical *Cyanops oorti* from Sumatra (many specimens examined) by having crown and the throat much paler, varying from "pale greenish yellow" to "pice-yellow" of Ridgway, against pale "cadmium-yellow." The crown of the Sumatran bird is also deeper, less greenish yellow. The feathers in front of the eye and the periocular region are blue, like the cheeks, or at most slightly tinged with green anteriorly, not distinctly apple-green.

Types. Ad ♂. Dalat, 5000 ft., S. Annam. 6 April, 1918.

Ad ♀. Dalat, 5000 ft., S. Annam. 4 May, 1918.

Dimensions. ♂. T. L. 218; W. 97; Ts. 25; bill from gape 32 mm. ♀. T. L. 228; W. 97; T. 65; Ts. 25; bill from gape 32 mm.

1 ♂, 4 ♀. Dran, 3000 ft., S. Annam. 10-17 May, 1918.

3 ♂, 2 ♀. Dalat, 5000 ft., S. Annam. 5-9 April, 4 May, 1918.

"Iris brown, orbital skin brownish olive; bill black, base grey; feet olive."

Males. T. L. 220, 233, 218, 215; W. 94, 97, 97, 94; T. 64, 68, 64, 65 mm.

Females. T. L. 220, 230, 222, 224, 223, 228; W. 89, 90, 93, 90, 91, 97; T. 63, 62, 65, 67, 65, 65 mm.

The Malay race also differs, but very slightly and only in average characters, from the typical Sumatran form.

53. *Cyanops franklini auricularis*, subsp. nov.

Differs from typical *C. franklini franklini* from the eastern Himalaya in having beneath the yellowish grey of the lower throat an incomplete gorget of black blue-tipped feathers; ear-coverts black tipped with violet-white posteriorly, bordered behind with a broken line of bluish violet.

Types. ♂ ♀. Langbian Peaks, 5500-6500 ft., S. Annam. 26 April, 1918.

♂. T. L. 230; W. 92; T. 63; Ts. 25.5; bill from gape 32.5 mm.

♀. T. L. 226; W. 93; T. 64; Ts. 24; bill from gape 30 mm.

“Iris dark, bill black with base grey, feet olive.”

1 ♀, 1 ? imm. Dalat, 5000 ft., S. Annam. 5 May, 1918.

2 ♂, 1 ♀. Arbre Broyé, 5400 ft., S. Annam. 12 May, 1918.

7 ♂, 3 ♀, 1 ♂ imm. Langbian Peaks, 6-7500 ft., S. Annam. 15-26 April, 1918.

Males. T. L. 207, 224, 228, 217, 222, 225, 235, 233, 230; W. 91, 91, 93, 93, 92, 94, 92, 92 mm.

Females. T. L. 236, 205, 228, 222, 226; W. 96, 92, 97, 93, 93 mm.

This subspecies is extremely well marked and by many ornithologists would be given full specific rank. We have based our diagnosis on descriptions and the examination of a somewhat indifferent specimen from Darjiling.

54. *Megalæma lagrandieri* (Verr.).

Shelley, Cat. xix. 1891, p. 75.

1 ♂, 1 ♀. Trang Bom, Cochin China. 3 June, 1918.

3 ♂, 3 ♀. Daban, 650 ft., S. Annam. 13-21 March, 1918.

3 ♂, 2 ♀. Dran, 3000 ft., S. Annam. 31 March-16 May, 1918.

♂ ♀. Arbre Broyé, 5400 ft., S. Annam. 12 May, 1918.

“Iris dark, orbital skin brownish black; maxilla, culmen and median parts black, remainder grey; mandible grey, extreme base bluish; feet olive-green.”

Males. T. L. 294, 310, 335, 330, 305, 318, 335; W. 135, 128, 126, 131, 134, 130, 136 mm.

Females. T. L. 300, 325, 325, 340, 328, 327, 328; W. 125 (worn), 126, 122, 135, 134, 140, 139 mm.

This very distinct Barbet appears to be only represented by a few specimens in the French Museums and may, with advantage, be redescribed here.

Adult male. General colour green with a slight bluish tinge on the wing-coverts and tertiaries; mantle and scapulars olive-green; underparts yellowish green, the middle of the abdomen washed with blue. Crown and nape dark brown,

the feathers with ill-defined paler edges, in worn plumage pale brownish buff, with dark shaft-stripes. Throat dull ashy-brown indistinctly margined, washed with greenish or bluish or sometimes very faintly with orange-red. Frontal plumes greenish at the base, tipped with red, succeeded by a narrow frontal band. Crown-feathers broadly tipped with sky-blue and a marked eyebrow of the same colour; lores and a stripe below the eye to the anterior ear-coverts pale ashy, tipped with blue; posterior ear-coverts pale ashy, sometimes washed with blue, on each side of the neck a series of narrow shining blue streaks; feathers of the posterior nape and upper mantle tipped with bright maroon. Under tail-coverts scarlet; tail beneath bluish green; under wing-coverts and axillaries and interior edging of quills yellowish buff.

Female. Similar.

55. *Thereiceryx flavostrictus flavostrictus* (Temm.).

Cyanops phaeostriata Shelley, Cat. Birds, xix. 1891, p. 76; Oustalet, p. 248.

Cyanops faiostricta saigonensis Neumann, Bul. Brit. Orn. Club, xxiii. 1908, p. 31.

Thereiceryx phaeostriata Robinson, Ibis, 1915, p. 737.

Thereiceryx flavostrictus Kloss, Ibis, 1918, p. 100.

4 ♂, 5 ♀. Daban, 650 ft., S. Annam. 17-24 March, 1918.

“Iris hazel or crimson; maxilla black, sides of base grey; mandible black at the tip, base grey; feet olive.”

Males. T. L. 255, 255, 268, —; W. 107, 109, 109, 104 mm.

Females. T. L. 246, 260, 247, —, —; W. 109, 107, 111, 102, 111 mm.

56. *Thereiceryx lineatus lineatus* (Vieill.).

Cyanops lineata Shelley, Cat. xix. p. 80; Oustalet, p. 248.

Thereiceryx lineatus Kloss, Ibis, 1918, p. 100.

2 ♂, 1 ♀. Trang Bom, Cochinchina. 1 June, 1918.

Males. T. L. 270, 270; W. 123, 117 mm.

Female. T. L. 270; W. 118 mm.

These specimens, and others from Siam, are precisely intermediate in size between the large form *T. l. hodgsoni* (Bp.) type from Nepal and the typical *T. l. lineatus* from Java. For these the name *Megalaima maclellandi*, Moore (Cat. Birds E. I. Co. Mus. ii. 1856-8, p. 637), from north-eastern Bengal, or more probably Assam, is available if desired.

57. *Mesobucco duvauceli orientalis* Robinson.

Robinson, Ibis, 1915, p. 738.

1 ♂ ad. Trang Bom, Cochin China. 1 June, 1918.

1 ♂ ad. Daban, 650 ft., S. Annam. 24 March, 1918.

“Iris dark, bill black, feet dull pale olive.”

T. L. 170, 180; W. 83, 83 mm.

These specimens agree well with three specimens of the original typical series, with which we have compared them.

Count Nils Gyldenstolpe obtained one young specimen of this species in northern Siam at Koon Tau (K. Svenska Vet.-Akad. Handl. Bd. lvi. No. 2, 1916, p. 100); as it was so young as to be almost uniformly green, we are at a loss to understand how the author was able to identify it subspecifically at all. Furthermore, he is in error in stating that the above subspecies was founded on a single specimen from Koh Mehsi, as a verification of the original reference would have shown.

58. *Xantholæma hæmatocephala* (P. L. S. Müll.).

Oustalet, p. 250; Kloss, Ibis, 1918, p. 101.

1 ♀. Daban, 650 ft., S. Annam. 22 March, 1918.

“Iris dark, orbital skin dull red; maxilla black, sides of base pale grey; mandible black, fleshy beneath; feet dull crimson.”

T. L. 170; W. 80 mm.

59. *Gecinus erythropygus erythropygus* Elliot.

Gecinus erythropygus Oustalet, p. 257; Kloss, Ibis, 1918 p. 102.

2 ♂, 3 ♀. Daban, 650 ft. S. Annam. 13-27 March, 1918.

“Iris lemon-yellow; bill greenish yellow sometimes tinged with blackish on the culmen; feet dull olive.”

Males. T. L. 330, 330; W. 155, 154 mm.

Females. T. L. 325, 320, 313; W. 155, 156, 154 mm.

A male *G. e. nigrigenis* from Siam (W. 152 mm.) only differs in having a blackish bill, a rather larger red occipital patch, and a white postorbital stripe.

60. *Gecinus vittatus vittatus* (Vieill.).

Gecinus vittatus Oustalet, pp. 252–253 (partim).

1 ♂ ad., 1 ♂ imm., 2 ♀ ad. Trang Bom, Cochin China. 2–6 June, 1918.

Males. T. L. 306, 275; W. 131 (worn), 130 (worn).

Females. T. L. 308, 300; W. 135 (worn), 129 (worn).

There is no doubt that these specimens should be placed with the typical race of the species from Java, with which agree specimens from Sumatra and the southern third of the Malay Peninsula. Under *G. r. eisenhoferi* (Gyldenstolpe) of northern Siam should be placed all those birds with a wing of more than 135 mm.

61. *Gecinus vittatus eisenhoferi* (Gyldenstolpe).

Ornith. Monatsb. 1916, p. 28; Kloss, Ibis, 1918, p. 103; Robinson, Journ. Fed. Malay States Mus. vii. 1917, p. 164.

Gecinus vittatus Oustalet, pp. 252, 253 (part.); Robinson, Ibis, 1915, p. 738.

1 ♂, 1 ♀. Daban, 650 ft., S. Annam. 18–20 March, 1918.

“Iris crimson, orbital skin leaden; maxilla black, mandible greenish yellow, tip and base black; feet olive.”

Male. T. L. 325; W. 141; T. 117 mm.

Female. T. L. 330; W. 137; T. 118 mm.

These specimens agree with the Siamese and Cambodian birds in being of slightly larger average size than *G. v. vittatus*. In addition they are distinctly brighter in colour than the former, especially on the sides of the neck. The female has a few feathers at the base of the crest tinged with orange-red, but this is not impossibly abnormal.

62. *Gecinus canus occipitalis* (Vig.).*Gecinus occipitalis* Oustalet, p. 254.*Gecinus canus hessei* (Gyldenstolpe); Kloss, Ibis, 1918, p. 101.

2 ♂, 1 ♀. Trang Bom, Cochin China. 2-5 June, 1918.

1 ♂, 2 ♀. Daban, 650 ft., S Annam. 18-27 March, 1918.

1 ♀. Dran, 3000 ft., S. Annam. 10 May, 1918.

1 ♀. Dalat, 5000 ft., S. Annam. 30 April, 1918.

"Iris crimson, orbital skin dull blue or leaden; bill blackish, base of mandible sometimes grey or greenish; feet greyish plumbeous."

Males. T. L. 323, 335, 345; W. 142, 150, 148 mm.*Females.* T. L. 324, 340, 320, 340, 338; W. 140, 145, 145, 144, 147 mm.

There seems to be no material difference in size between specimens from the western Himalaya, ranging through Assam, the Shan States, and Siam to Cochin China and Annam. Siamese specimens on which Gyldenstolpe founded *P. c. hessei* are certainly, on the dimensions given by the author, not smaller than birds from the Himalaya, so that any distinction would have to be based on colour alone: for the present we are not inclined to regard this race as even subspecifically distinct.

63. *Brachylophus chlorolophus* (Vieill.).*Gecinus chlorolophus* Oustalet, p. 256.*Brachylophus chlorolophoides* Gyldenstolpe, Ornith. Monatsber, 1916, p. 29; id. Kungl. Sv. Vet.-Akad. Handl. lvi. No. 2, 1916, p. 90, pl. 2. fig. 3.*Brachylophus chlorolophus chlorolophoides* Kloss, Ibis, 1918, p. 105.

1 ♀ ad. Trang Bom, Cochin China. 31 May, 1918.

1 ♀ ad. Daban, 650 ft., S. Annam. 3 March, 1918.

2 ♂ ad. Dran, 3000 ft., S. Annam. 18 May, 1918.

1 ♂ ad., 2 ♂ imm. Dalat, 5000 ft., S. Annam. 7 April, 1918.

1 ♀ ad., 1 ♀ imm., 1 ♂ imm. Dalat, 5000 ft., S. Annam. 5 May, 1918.

“Iris crimson ; maxilla black, sides of base yellow ; mandible greenish yellow, tip black ; feet olive-brown.”

Males. T. L. 260, 268, 262, 265 ; W. 132, 131, 131, 133 mm.

Females. T. L. 255, 260, 265 ; W. 132, 130, 131 mm.

We can detect no difference between these birds and descriptions of *B. chlorolophus*. In size birds in the Indian Museum ranging from Nepal to the Southern Shan States have wings from 129–138 mm. The Annam birds are certainly not *B. c. longipennis* (Hartert) of Hainan, which has the crown red with large green patches. In view of the fact that *B. c. chlorolophus* has been recorded by Gyldenstolpe from the same locality as his *B. chlorolophoides* (type unique), which is described as having the crown greenish grey broadly tipped with bloody red and the tail-feathers with broad yellowish-red margins, the validity of the latter remains to be established. If further specimens are forthcoming it requires comparison with *B. longipennis*, which has been unfortunately named owing to reference to the very small southern Indian form *B. c. chlorigaster*. The wing is not larger than in many specimens of typical *B. c. chlorolophus*. The female recorded as *B. c. chlorolophoides* by Kloss from eastern Siam is absolutely indistinguishable from the present series. Quite young birds have the breast and fore-neck almost uniform grey and the flanks markedly barred with the same ; crown greyish instead of green, the feathers in the male tipped with crimson.

64. *Gecinulus grantia* McClell.

Hargitt, Cat. xviii. 1890, p. 134 ; Oustalet, p. 259.

1 ♀. Daban, 650 ft., S. Annam. 26 March, 1918.

“Iris crimson ; bill greyish white, darkest at base ; feet dirty olive.”

T. L. 275 ; W. 134 mm.

This specimen appears to be a perfectly typical example of *G. grantia* and cannot be referred to the allied *G. viridanus* Slater of Fokien.

65. *Iyngipicus canicapillus* (Blyth).

Oustalet, p. 262.

4 ♂, 3 ♀. Daban, 650 ft., S. Annam. 14-23 March, 1918.

2 ♂, 2 ♀. Dran, 3000 ft., S. Annam. 1 April-11 May, 1918.

1 ♂, 1 ♀. Dalat, 5000 ft., S. Annam. 6 April-7 May, 1918.

"Iris dark, bill brownish black, feet dull olive."

Males. T. L. 143, 147, 132, 138, 145, 142, 137; W. 81, 84, 85, 80, 85, 82, 85 mm.

Females. T. L. 130, 148, 146, 150, 147, 139, 145; W. 85, 85, 83, 90, 84, 82, 89 mm.

Many of this series are not fully adult, but the adults agree with a series from all parts of the Malay Peninsula.

66. *Dendrocopus analis* Horsf.

Dendrocopus analis longipennis Hesse, Ornith. Monatsb. xx. 1912, p. 82.

Dryobates analis Stresemann, Nov. Zool. xx. 1913, p. 349.

1 ♀. Tour Cham, Phaurang, S. Annam. 22 May, 1918.

T. L. 170; W. 100; T. 60; Ts. 20; exposed culmen 22.5 mm.

We agree with Stresemann (*l. c. s.*) that only one form of this bird is recognizable, ranging from Burma and Annam to Java and Bali, with wings varying from 92 to 102 mm. The supposed differences in the length of the wings relied on by Hesse are individual and not geographical.

The Annam specimen has been compared with a large series from Java.

67. *Hypopicus hyperythrus* Vig.

Oustalet, p. 259.

3 ♂, 2 ♀. Daban, 650 ft., S. Annam. 20-27 March, 1918.

"Iris crimson (male), brown (female); maxilla black, or greenish yellow with the culmen narrowly black; mandible greenish yellow, the tip yellow; feet very dark olive or pale leaden."

Males. T. L. 225, 231, 225 ; W. 125, 123, 122 mm.

Females. T. L. 223, 225 ; W. 119, 121 mm.

One male, in which the upper mandible is almost entirely yellow, has a patch of crimson on the sides of the neck behind the ear-coverts, which is one of the characters assigned to *H. h. marshalli* (Hartert), Vög. paläarkt. Faun. ii. 1912, p. 926, from the western Himalaya, which, however, is a larger bird (wing 126-136 mm.). The character is probably developed in fully adult birds. We are not convinced that the birds from eastwards of the Shan States are strictly conspecific with the typical form from Nepal and Sikkim, but the question can remain open for the present. They show but little affinity to the western and northern Chinese bird *H. h. subrufinus* (Cab. & Heine) = *H. h. poliopsis* Swinh.

68. *Pyrrhopicus pyrrhotis* (Hodgs.).

Hargitt, Cat. B. xviii. p. 380.

1 ♂ vix ad. Dran, 3000 ft., S. Annam. 29 March, 1918.

1 ♀ ad., 1 ♀ imm. Dalat, 5000 ft., S. Annam. 9-11 April, 1918.

1 ♂ ad., 3 ♂ imm., 1 ♀ ad. Langbian Peaks, 6-7500 ft., S. Annam. 17-27 April, 1918.

“ Iris dull crimson, orbital skin olive-brown ; bill yellow, base tinged with green ; feet olive-brown to brownish black.”

Males. T. L. 280, 283, 280, 280, 280 ; W. 141, 146, 141, 141, 146 mm.

Females. T. L. 290, 263, 275 ; W. 140, 136, 146 mm.

The adult males of this series appear to agree fairly well with adults from the mountains of the Malay Peninsula, except that the latter have a strong claret flush on the mantle. Immature birds agree exactly with the description of *P. sinensis* (Rickett)* and suggest that that race is founded on young examples ; *P. p. hainanus* (Grant) † appears to be somewhat smaller.

* Bull. Brit. Orn. Club, vi. 1897, p. 1 ; Ibis, 1897, p. 603.

† Ibis, 1899, p. 585.

69. *Chrysophlegma flavinucha pierrei* Oustalet.

Chrysophlegma pierrei Oustalet, p. 258.

1 ♂ ad., 2 ♂ imm., 1 ♀ imm. Trang Bom, Cochin China.
30 May–3 June, 1918.

4 ♂ ad., 1 ♀ ad. Daban, 650 ft., S. Annam. 17–26 March,
1918.

2 ♂ ad. Dran, 3000 ft., S. Annam. 30 March–3 May,
1918.

1 ♂ imm., 2 ♀ vix ad. Dalat, 5000 ft., S. Annam. 4 April–
4 May, 1918.

“Iris crimson, orbital skin olive; maxilla black, sides of
base grey; mandible grey, tip and edges black; feet dull
olive.”

Males. T. L. 320, —, 328, 325, 315, 340, 337, 340, —,
300; W. 146, 146, 155, 157, 152, 163, 155, 157, 153,
147 mm.

Females. T. L. 290, 336, 320, 330; W. 141, 156, 144,
151 mm.

This race is evidently only a subspecies of *C. flavinucha*,
like all the other continental races. It is generally greyer
below than the other forms, with the yellow of the throat of
the male more restricted. The first four specimens listed
are practically topotypes. Young birds of both sexes are
alike and resemble the adult female, but have the chestnut
malar stripe much less pronounced and the top of the head
greener. We have seen examples of this bird from eastern
Siam.

70. *Tiga javanensis intermedia* (Blyth).

Tiga javanensis Oustalet, p. 265.

Tiga javanensis intermedia Kloss, Ibis, 1918, p. 109.

1 ♀ imm. Dran, 3000 ft., S. Annam. 18 May,
1918.

T. L. 280; W. 141 mm.

This immature bird evidently belongs to the northern race
named by Blyth, and not to the typical Malayan form in
which the wing does not exceed 136 mm.

71. *Chrysocolaptes guttacristatus guttacristatus* (Tick.).

Chrysocolaptes guttacristatus Oustalet, p. 266.

Chrysocolaptes guttacristatus guttacristatus Kloss, Ibis, 1918, p. 111.

Chrysocolaptes guttacristatus indomalayicus Hesse, Ornith. Monatsb. 1911, p. 182; Robinson, Journ. Fed. Malay States Mus. vii. 1917, p. 161.

1 ♀ ad. Trang Bom, Cochin China. 3 June, 1918.

1 ♂, 2 ♀ ad. Daban, 650 ft., S. Annam. 16–18 March, 1918.

1 ♂. Dran, 3000 ft., S. Annam. 17 May, 1918.

1 ♂, 1 ♀ subad. Dalat, 5000 ft., S. Annam. 7 April, 1918.

“Iris pinkish yellow, orbital skin black; bill brownish black; feet dirty olive. Immature female, iris greyish yellow and the feet plumbeous olive.”

Males. T. L. 300, 303, 315; W. 152, 151, 164 mm.

Females. T. L. 290, 315, 305, 313; W. 158, 155, 151, 159 mm.

After examination of the large series in the Federated Malay States Museums and in the Indian Museum, Calcutta, with additional material from Siam we are forced to the conclusion that, excluding the races in southern India and the extreme south of the Malay Peninsula, which are quite distinct, no more than two Himalayan and Indian and Indo-Chinese races can be maintained, namely:—a large Himalayan race, *C. g. sultaneus* Hodgs., ranging from Nepal through Assam and the Daffa Hills to Bhamo (wing about 168–190 mm.) and the typical *C. g. guttacristatus*, originally described from Chota Nagpur, which extends from the Konkan in western India across central India and Burma to Cochin China and also south through Tenasserim to the Langkawi Is., but no farther (wing about 168–154 mm.). *C. g. indomalayicus* Hesse, of which we have examined a series of actual topotypes, is within the range of these dimensions and should therefore be suppressed.

72. *Hemicercus canente* (Less.).

Oustalet, p. 267.

3 ♂, 3 ♀. Daban, 650 ft., S. Annam. 14-24 March, 1918.

“ Iris dark, orbital skin black, bill and feet black or leaden-black.”

Males. T. L. 170, —, 160; W. 96, 97, 99 mm.

Females. T. L. 160, 165, 155; W. 95, 90, 98 mm.

73. *Alophonerpes pulverulentus harterti* (Hesse).

Hemilophus pulverulentus Oustalet, p. 268.

Mulleripicus pulverulentus harterti Hesse, Ornith. Monatsb. xix. 1912, p. 182; id. Mittheil. Zool. Mus. Berlin, vi. 1912, pp. 231-232.

Alophonerpes pulverulentus harterti Robinson, Journ. Fed. Malay States Mus. vii. 1917, p. 163.

1 ♂. Trang Bom, Cochin China. 3 June, 1918.

1 ♂, 1 ♀. Daban, 650 ft., S. Annam. 20, 27 March, 1918.

1 ♂, 1 ♀. Dran, 3000 ft., S. Annam. 11 May, 1918.

“ Iris dark: bill grey tipped with black on culmen, base of lower mandible bluish or plumbeous; feet dull plumbeous to blackish.”

Males. T. L. 458, 470, 510; W. 220, 223, 232; T. 159, 169, 175 mm.

Females. T. L. 450, 467; W. 221, 220; T. —, 166 mm.

Hesse described his race, of which the type came from Pya, Upper Chindwin, as being lighter grey than the typical race with a rather longer tail. The typical locality is Java, from whence we have no specimens, but the above series is certainly greyer than birds from Pahang and Borneo with which we have compared them. The specimen from Cochin China is, however, much darker than the others, but is in worn plumage.

74. *Miglyptes jugularis* Blyth.

Oustalet, p. 391.

1 ♂, 1 ♀. Trang Bom, Cochin China. 30 May-6 June, 1918.

1 ♂, 2 ♀. Daban, 650 ft., S. Annam. 17-24 March, 1918.

"Iris dark, bill black, feet dull olive."

Males. T. L. 175, 182; W. 101, 101 mm.

Females. T. L. 170, 190, 195; W. 103, 101, 104 mm.

These specimens seem perfectly similar to those from Arakan and Tenasserim.

75. *Thriponax feddeni* (Blanf.).

Oustalet, p. 268.

1 ♂, 1 ♀. Trang Bom, Cochín China. 3 June, 1918.

1 ♂ imm. Daban, 650 ft., S. Annam. 13 March, 1918.

1 ♂, 1 ♀. Dalat, 5000 ft., S. Annam. 2 May, 1918.

"Iris pale yellow, bill black, feet dull plumbeous. *Imm.* Iris bluish, feet lavender-grey."

Males. T. L. 412, 430, 375; W. 201, 207, 197 mm.

Females. T. L. 380, 395; W. 206, 201 mm.

76. *Picumnus innominatus malayorum* Hartert.

Vög. paläarkt. Faun. ii. 1912, p. 937.

2 ♀. Dran, 3000 ft., S. Annam. 14 May, 1918.

1 ♂. Dalat, 5000 ft., S. Annam. 1 May, 1918.

"Iris dark, orbital skin black; bill plumbeous, tip black; feet plumbeous."

Males. T. L. 101; W. 54 mm.

Females. T. L. —, —; W. 55, 56 mm.

These specimens agree well with a series from the mountains of the Malay Peninsula, separated by Hartert under the above name.

77. *Sasia ochracea reichenowi* Hesse.

Ornith. Monatsb. xix. 1911, p. 181; Kloss, Ibis, 1918, p. 113.

1 ♂. Daban, 650 ft., S. Annam. 16 March, 1918.

"Iris carmine, orbital skin dull crimson; maxilla black, mandible grey; feet orange."

T. L. 86; W. 51 mm.

This specimen appears to agree with the diagnosis of this slightly differentiated subspecies described from Tavoy, Tenasserim.

78. *Psarisomus dalhousiæ* (Jameson).

Oustalet, p. 62.

4♂, 4♀. Dran, 3000 ft., S. Annam. 13 March, 14 May, 1918.

1♀. Dalat, 5000 ft., S. Annam. 7 April, 1918.

"Iris, inner ring pink and outer blue; orbital skin yellow, edges of the eyelids green: maxilla apple-green, tip pale blue and a blue patch behind the nostril; mandible deep yellow tipped with blue, edges green; feet green."

Males. T. L. 260, 263, 262, 268; W. 98, 98, 98, 99; T. 125, 126, 131, 119 mm.

Females. T. L. 265, 265, 270, 268, 245; W. 98, 99, 99, 99, 93; T. 130, 124, 128, 127, 105 mm.

The difference between the mainland and insular forms of *Psarisomus* is very slight indeed. Sumatran birds having the tail slightly longer. No constant differences in colour can be detected when sufficiently large series are compared.

79. *Eurylæmus ochromelas harterti* van Oort.

Notes Leyden Mus. xxxi. 1909, p. 209.

1♂, 1♀. Trang Bom, Cochin China. 5 June, 1918.

3♂, 1♀. Daban, 650 ft., S. Annam. 14-15 March, 1918.

"Iris cobalt; maxilla proximally blue, distally apple-green, edge black; mandible blue, edge black; feet fleshy blue."

Males. T. L. 222, 233, 220, 226; W. 113, 108, 105, 106 mm.

Females. T. L. 215, 218; W. 102, 103 mm.

These specimens have been compared with topotypes of the subspecies from the Deli District, north-eastern Sumatra, with which they exactly agree.

80. *Corydon sumatranus sumatranus* (Raffles).

Oustalet, p. 63.

1♂, 1♀. Trang Bom, Cochin China. 5 June, 1918.

4♂, 1♀. Daban, 650 ft., S. Annam. 13-23 March, 1918.

“Iris dark, orbital skin livid red; bill livid red tipped with bluish grey; feet black.”

Males. T. L. 255, 285, 270, 280, 270; W. 130, 134, 131, 135, 137 mm.

Females. T. L. 250, 270; W. 127, 132 mm.

The concealed back spot in all these specimens is orange-red or flame-colour, whereas in most Malayan and Sumatran specimens it is pale yellow, sometimes tinged with orange, but deep-coloured patches also occur. The difference is not associated either with sex or with locality.

81. *Cymborhynchus macrorhynchus malaccensis* Salvad.

Kloss, Ibis, 1918, p. 114.

Cymborhynchus macrorhynchus Oustalet, p. 63.

1 ♀ ad. Trang Bom, Cochin China. 2 June, 1918.

T. L. 215; W. 97 mm.

Tail with the outer three pairs of feathers barred with white on the inner webs, the white reaching to the shaft on the outer pair.

82. *Pitta nipalensis soror* Wardl. Rams.

Sclater, Cat. xiv. 1888, p. 415.

1 imm. Dran, 3000 ft., S. Annam. 21 March, 1918.

1 ♂, 1 ♀. Langbian Peaks, 6-7500 ft., S. Annam. 15-18 April, 1918.

“Iris dark; bill (male) deep fleshy streaked with dark brown, (female) maxilla dark brown, mandible pinkish fleshy washed with brown; feet salmon washed with brown. Bill of young bird pale fleshy throughout.”

Male. T. L. 240; W. 122 mm.

Female. T. L. 230; W. 109 mm.

The adult male only differs from that sex in *P. nipalensis douglasi* Grant, as described by Hartert (Nov. Zool. xvii. 1910, p. 224), in having the whole of the occiput and nape rich rufous, not merely with cinnamon-rufous superciliaries. The feathers of the crown are dark and have very faint obscure black edgings; black bases to the feathers of the fore-neck form an irregular gorget. Rump and upper tail-coverts dull peacock-green not blue. The female differs from

the male in having no tinge of rufous on the head, the pink wash on the chest and fore parts of the head and throat almost absent, and the mantle and scapulars duller, more olivaceous-green. The young bird, sex doubtful, agrees with the type-description, having a distinct patch of ashy-blue on the nape. It is probably a male, as the pink wash on the chest and head is already strongly marked.

83. *Pitta cyanea* Blyth.

Robinson, Ibis, 1915, p. 742.

2 ♂. Dran, 3000 ft., S. Annam. 31 March, 1 April, 1918.

“Iris dark, bill black, feet bluish-lilac.”

T. L. 240, — ; W. 118, 114 mm.

84. *Muscicapā strophciata* (Hodgs.).

Hartert, Vög. paläarkt. Faun. i. p. 484.

Siphia strophciata Stuart Baker, Ibis, 1906, p. 270.

6 ♂, 8 ♀. Langbian Peaks, 5500–7500 ft., S. Annam.

15 April, 27 April, 1918.

“Iris dark ; bill black ; feet dull yellow or fleshy washed with brown.”

Males. T. L. 140, 140, 130, 144, 133, 142 ; W. 72, 73, 68, 72, 70, 74 mm.

Females. T. L. 137, 144, 146, 133, 132, 135, —, — ; W. 69, 69, 70, 69, 69, 67, 68, 69 mm.

A nest and three eggs obtained entirely confirms Mr. Osmaston's notes (*cf.* Stuart Baker, *loc. cit.*), the only previous record for the nidification. They were taken at the height of about five feet in a shallow hole in a large tree. The nest is cup-shaped, built of moss, and lined with fine fern-tendrils. It contained three eggs, pure white elongated ovals. Dimensions 19 × 13.5 mm.

85. *Alseonax latirostris* (Raffles).

Oustalet, p. 51 ; Kloss, Ibis, 1918, p. 190.

1 ♂, 2 ♀. Dran, 3000 ft., S. Annam. 10–18 May, 1918.

“Iris dark ; maxilla black, mandible yellow with a black tip ; feet dark brown.”

Male. T. L. 134 ; W. 69 mm.

Females. T. L. 129, 134 ; W. 69, 71 mm.

86. *Cyornis rubeculoides rubeculoides* (Vig.).

Siphia rubeculoides Sharpe, Cat. iv. p. 445.

2 ♂ ad., 1 ♂ imm., 2 ♀ ad. Dran, 3000 ft., S. Annam.
10-18 May, 1918.

"Iris dark, bill black, feet violet-brown."

Males. T. L. 148, 141, 138 (imm.); W. 72, 70, 72 mm.

Females. T. L. 147, 143; W. 69, 67 mm.

These specimens are very pale below in the male, thereby differing from *C. r. dialilama* Salvad. The females differ from those of *C. sumatrensis* in being tinged with rufous above, lacking any bluish-grey. They are considerably lighter below with the flanks less infuscated than the females of *C. r. dialilama*.

87. *Cyornis sumatrensis* Sharpe.

Kloss, Ibis, 1918, p. 189.

2 ♀. Daban, 650 ft., S. Annam. 22-26 March, 1918.

"Iris dark, bill black, feet dull fleshy-grey."

T. L. 136, 137; W. 65, 65 mm.

Underparts tinged with greyish blue, belly pure white.

88. *Digenea submoniliger* Hume.

Stray Feathers, v. 1877, p. 105; Sharpe, P. Z. S. 1888.
p. 246.

2 ♂, 1 ♀. Dalat, 5000 ft., S. Annam. 5 April-7 May,
1918.

1 ♂, 1 ♀. Arbre Broyé, 5400 ft., S. Annam. 15 May,
1918.

"Iris dark, bill blackish brown, feet pale fleshy."

Males. T. L. 128, 126, 130; W. 63, 62, 64 mm.

Females. T. L. 130, 120; W. 65, 63 mm.

Four specimens have faint indications of the black line separating the white gorget from the breast, one has none. Eyebrow and lores pale ochraceous buff; primaries edged externally with rufous.

89. *Niltava grandis decorata*, subsp. nov.

2 ♂. Dran, 3000 ft., S. Annam. 13-16 May, 1918.

4 ♂, 2 ♀. Dalat, 5000 ft., S. Annam. 4-8 April, 1918.

6 ♂, 5 ♀, 1 ♀ imm. Langbian Peaks, 6-7500 ft. 15-23 April, 1918.

"Iris dark, bill and feet black, sometimes dull brown washed with bluish."

Males. T. L. 210, 208, 207, 188, 200, —, 210, —, 208, 208, 205, 212; W. 102, 99, 98, 96, 94, 101, 101, 101, 99, 99, 103, 104 mm.

Females. T. L. 205, 210, 205, 208, —, —, 210, 170 (juv.); W. 97, 97, 99, 98, 95, 95, 98, 89 (juv.).

Male. Similar to *N. g. decipiens* from Sumatra, but slightly larger.

Females. Like that of *N. g. decipiens*, but the primaries, rump, upper tail-coverts, and tail much duller, less rufous; crown and occiput shining cobalt-blue, very much brighter and clearer than in *N. g. decipiens*, where it is merely a diffused wash of duller blue.

Types, ♂ and ♀ from the Langbian Peaks, 6500 ft., 23 April, 1918.

Male. T. L. 212; W. 104; T. 98; Ts. 23; bill from gape 21 mm.

Female. T. L. —; W. 95; T. 91; Ts. 23; bill from gape 21 mm.

The bright cap of the female distinguishes this well-marked subspecies at a glance.

90. *Dendrobiastes hyperythra annamensis*, subsp. nov.

4 ♂. Dalat, 5000 ft., S. Annam. 7 April-3 May, 1918.

3 ♂, 2 ♀. Langbian Peaks, 6-7500 ft., S. Annam. 15-26 April, 1918.

"Iris dark, bill black, feet lilac-brown or fleshy."

Males. T. L. 120, 120, 120, 117, 132, 118, 131; W. 62, 64, 63, 63, 64, 61, 68 mm.

Females. T. L. 118, 108; W. 58, 58 mm.

Types. Adult male and female, Langbian Peaks, 6-7500 ft., South Annam, 20-22 April, 1918.

Male. T. L. 122; W. 64; T. 48; Ts. 19.5; bill from gape 14 mm.

Female. T. L. 108 ; W. 58 ; T. 48 ; Ts. 18.5 ; bill from gape 14.5 mm.

Male slate-colour above (Ridgway), intermediate between deep and dark Payne's grey. Female brownish olive above, slightly modified by the grey bases of the feathers. (The second female is very faintly tinged with slate on the lower back.)

The male differs from *D. h. vulcani* Robinson, of Java, in having the abdomen washed with buff; it is much paler than *D. h. malayana* Grant, of the Malay Peninsula and Sumatra, and has white under tail-coverts.

The female is brighter below than *D. h. vulcani*, the throat and abdomen washed with buff (not whitish) and the breast and flanks not infuscated; differs from *D. h. malayana* in being paler and brighter below, lacking infuscation on breast and flanks.

The following key, based on eighty specimens, indicates the differences between the Annam and Malayan races; all apparently differ from *D. h. hyperythrus* of Darjiling in being darker and greyer above. No example of the species appears to have been met with between Manipur in the north-west and Annam and the Malay States in the south-east :—

Males.

- a.* Richer coloured throughout below, under tail-coverts tinged with buff *malayana.*
b. Paler throughout below, under tail-coverts white.
a'. Abdomen whitish *vulcani.*
b'. Abdomen suffused with fulvous *annamensis.*

Females.

- a.* Breast darker and duller, flanks infuscated.
a'. Darker below, throat and abdomen tinged with fulvous *malayana.*
b'. Paler below, throat and abdomen whitish *vulcani.*
b. Breast paler but brighter, flanks scarcely infuscated, throat and abdomen tinged with fulvous *annamensis.*

91. *Muscicapula melanoleuca* (Hodgs.).

3 ♂, 1 ♀. Dalat, 5000 ft., S. Annam. 8 April-8 May, 1918.

3 ♂, 2 ♀. Arbre Broyé, 5400 ft., S. Annam. 13-14 May, 1918.

4 ♂, 3 ♀. Langbian Peaks, 6-7500 ft., S. Annam. 19-22 April, 1918.

"Iris dark, bill and feet black."

Males. T. L. 117, 114, 124, 114, 117, 108, 116, 118, 115 (worn); W. 56, 57, 57, 60, 59, 55, 62, 59, 59, 58 mm.

Females. T. L. 114, 110, —, 110, 112; W. 57, 55, 58, 57, 55, 57 mm.

We have carefully compared this series with absolute topotypes of *M. m. westermanni* Sharpe, from which they differ in having the upper surfaces of the females paler, less bluish, grey, and the rump slightly washed with olivaceous. Males are exactly similar.

92. *Hypothymis azurea styani* (Hartl.).

Hypothymis azurea styani Stresemann, Nov. Zool. xx. 1913, p. 295; Kloss, Ibis, 1918, p. 190.

Hypothymis azurea Oustalet, p. 52.

1 ♀. Trang Bom, Cochin China. 21 May, 1918.

2 ♂, 1 ♂ imm., 2 ♀. Daban, 6500 ft., S. Annam, 14-23 March, 1918.

1 ♀. Dran, 3000 ft., S. Annam. 11 May, 1918.

"Iris dark; bill dull cobalt, tip and edges of maxilla black; feet dull cobalt to dark plumbeous."

Males. T. L. 164, —, 160; W. 70, 72, 70 mm.

Females. T. L. 163, 160, 162, 160; W. 63, 69, 67, 71 mm.

93. *Cryptolopha castaneiceps annamensis*, subsp. nov.

Differs from *C. c. castaneiceps* in having the abdomen entirely bright yellow, not white, mesially; and from *C. c. sinensis* Rickett (Ibis, 1898, p. 332) in having white on the inner webs of the two outer pairs of tail-feathers instead of on one pair only.

Types. ♂ from Langbian Peaks, 27 April; ♀ from Dalat, 3 May.

"Iris dark; maxilla blackish; edge and angle of bill yellow in the male; mandible ochreous; feet greenish and yellowish brown."

3 ♀. Dalat, 5000 ft., S. Annam. 4 April–3 May.

1 ♂. Langbian Peaks, 6–7500 ft., S. Annam, 27 April.

Male. T. L. 101*; W. 53*; T. 43*; Ts. 17.5*; bill from gape —*.

Females. T. L. 97, 104, 107*; W. 50, 51, 49*; T. 40, 42, 41*; Ts. 16, 16, 16*; bill from gape, 10, 7, 10, 7, 10, 7* mm.

94. *Cryptolopha malcolmsmithi*, sp. nov.

2 ♂, 5 ♀. Langbian Peaks, 6–7500 ft., S. Annam. 17–22 April, 1918.

Nearest to *C. poliogenys* (Blyth), but with the whitish grey beneath much more extensive, reaching the breast; remaining underparts pale yellow, rump also yellow; a black stripe from the lores passing through the eye and a white supercilium from the base of the bill to the nape, broadest over the eye; feathers below the eye white; three outer pairs of tail-feathers mainly white. Sexes similar.

Types. Adult male and female from the Langbian Peaks, 6–7500 ft., S. Annam, 21 & 19 April, 1918.

“Iris dark; bill black, base of lower mandible yellow; feet yellow washed with brown or greenish.”

Males. T. L. 92 †, 94; W. 46 †, 46; T. 32 †, 33; Ts. 17 †, 18; B. f. g. 10 †, 10 mm.

Females. T. L. 95 †, 95, 90, 92, 91; W. 47 †, 49, 46, 45, 44; T. 33 †, 36, 33, 36, 32; Ts. 17 †, 17.5, 16, 16.5, 17.5; B. f. g. 10 †, 9.5, 11, 9.5, 10 mm.

One bird, partially in moult, has the tips to the wing-coverts gamboge-yellow, much deeper than the other specimens.

This little Flycatcher was entirely confined to the upper parts of the peak above 6000 feet.

95. *Cryptolopha tephrocephala ocularis*, subsp. nov.

1 ♂, 2 ♀. Dalat, 5000 ft., S. Annam. 5–8 April, 1918.

9 ♂, 3 ♀. Langbian Peaks, 6–7500 ft., S. Annam. 16–26 April, 1918.

* Types of the subspecies.

† Types of the species.

Differs from *C. c. tephrocephala* (Anderson) and *C. t. intermedia* La Touche, Bull. Brit. Orn. Club, vii. 1898, p. xxvii, in having a conspicuous particoloured ocular ring, yellow in front, white below and behind, interrupted above by the greyish black of the head.

Types. Adult male and female from the Langbian Peaks, 5200-7200 ft., South Annam, 25 & 16 April, 1918.

"Iris dark; maxilla blackish brown, edges sometimes yellowish; mandible yellow, sometimes washed with brown."

Males. T. L. 112, 113*, 116, —, —, 112, 118, 115, 118, 113; W. 56, 54*, 50, 55, 55, 56, 56, 56, 57, 55; T. 46*; Ts. 18*; B. f. g. 13.5* mm.

Females. T. L. 112, 113, 115*, 115, 111; W. 55, 54, 57*, 53, 56; T. 46*; Ts. 17*; B. f. g. 13* mm.

96. *Rhipidura albicollis albicollis* (Vieill.).

Oustalet, p. 53.

3 ♀. Dalat, 5000 ft., S. Annam. 5-11 April, 1918.

2 ♂, 2 ♀. Langbian Peaks, 6-7500 ft., S. Annam. 24-26 April, 1918.

"Iris dark, bill black, feet brown."

Males. T. L. 200, 192; W. 81, 78 mm.

Females. T. L. 175, 190, 197, 190, 184; W. 75, 75, 81, 75, 72 mm.

These birds appear clearer grey, less blackish, than a series of *R. a. atrata* Salvad., from the typical locality. One male from Langbian Peaks has the white superciliaries united by a marked frontal band.

97. *Terpsiphone paradisi affinis* (Blyth).

Terpsiphone affinis Oustalet, p. 55.

1 ♀ imm. Daban, 650 ft., S. Annam. 26 March, 1918.

"Iris dark; maxilla pale lilac, mandible pale grey, tips and edges black; feet bluish plumbeous."

T. L. 190; W. 80 mm.

98. *Culicicapa ceylonensis ceylonensis* (Swains.).

Culicicapa ceylonensis Oustalet, p. 55.

1 ♂, 1 ♀. Dalat, 5000 ft., S. Annam. 6-7 April, 1918.

* Types of the subspecies.

4 ♂, 5 ♀. Langbian Peaks, 6-7500 ft., S. Annam. 17-27 April, 1918.

"Iris dark; maxilla black, mandible fleshy tipped with black; feet yellowish brown."

Males. T. L. 132, 127, —, 132, 132; W. 66, 62, 64, 64, 62 mm.

Females. T. L. 122, 126, —, 126, 124, 126; W. 59, 59, 62, 61, 60, 58 mm.

Throughout the whole of its very extensive range, with the exception of Java and Bali, this Flycatcher shows but little local variation.

99. *Abornis superciliaris* (Tickell).

Oustalet, p. 57.

1 ♂. Daban, 650 ft., S. Annam. 20 March, 1918.

"Iris dark; bill black, edges of lower mandible fleshy; feet fleshy brown."

T. L. 113; W. 52 mm.

We have compared this specimen with one from the Abor Hills with which it agrees.

100. *Stoparola melanops* (Vig.).

Stoparola melanops Oustalet, p. 57.

3 ♂, 2 ♀. Dalat, 5000 ft., S. Annam. 10 April-4 May, 1918.

1 ♀. Arbre Broyé, 5400 ft., S. Annam. 14 May, 1918.

"Iris dark, bill and feet black."

Males. T. L. 160, 170, 174; W. 83, 84, 86 mm.

Females. T. L. 158, 165; W. 78, 78, 76 mm.

Differs from the southern form, *S. m. thalassinoides* Cab., in being larger. Alleged differences in colour are not confirmed by our large Malayan series.

101. *Graucalus macei siamensis* Stuart Baker.

Graucalus macei Oustalet, p. 43.

Graucalus macei macei Kloss, Ibis, 1918, p. 192.

Graucalus macei siamensis Stuart Baker, Bull. Brit. Orn. Club, xxxviii. 1918, p. 69.

2 ♂. Traung Bom, Cochin China. 1-6 June, 1918.

1 ♂, 2 ♀. Daban, 650 ft., S. Annam. 13-21 March, 1918.

2 ♂, 1 ♀. Dran, 3000 ft., S. Annam. 20 March, 17 May, 1918.

1 ♂, 1 ♀. Dalat, 5000 ft., S. Annam. 2 May, 1918.

"Iris dark (dull crimson in one bird), bill and feet black."

Males. T. L. 268, 265, 295, 288, 290, 282; W. 163, 158, 166, 159, 168, 165 mm.

Females. T. L. 277, 272, 280, 283; W. 160, 160, 159, 158 mm.

These specimens agree perfectly with one from Lat Bua Kao, eastern Siam.

In his recent review of the species (*l. c. s.*) Mr. Stuart Baker describes *G. m. siamensis* from Krabin, central Siam, and states that the Hainan bird is identical. If this is so the Indo-Chinese bird will have to be known as *Graucalus macei larvivorus* Hartert (Nov. Zool. xvii. p. 227), a name bestowed on Hainan examples in 1910. Baker may, however, be in error in including Hainan in the range of his race, as from Hartert's remarks and his comparison of *G. m. larvivorus* with *G. m. rexpineti* of Formosa, it might appear that the Hainan bird is darker on the throat-region and face, thus *siamensis* may possibly be good for the mainland form and we therefore use it for the present.

(The wing-length of 192 mm. given by Mr. Baker for a Siamese bird is the largest out of 184 specimens examined; either this is a misprint or the bird was a "wanderer" from the north-west.)

102. *Lalage saturata* (Swinh.).

Campophaga saturata Sharpe, Cat. Birds Brit. Mus. iv. 1879, p. 66.

5 ♂, 1 ♀. Dran, 3000 ft., S. Annam. 13 March-18 May, 1918.

2 ♀. Arbre Broyé, 5400 ft., S. Annam. 7-14 May, 1918.

1 ♀. Dalat, 5000 ft., S. Annam. 1 May, 1918.

"Iris dark, bill and feet black."

Males. T. L. 213, 220, 216, 217, 220; W. 108, 111, 115, 111, 108 mm.

Females. T. L. 218, 220, 218, 215; W. 111, 112, 111, 112 mm.

These birds are darker throughout than the specimens from south-west Siam recorded as *Volvocivora polioptera* (Kloss, Ibis, 1918, p. 194). They have grey abdomens and less grey on the wings, while the under tail-coverts are either grey or greyish white with white tips. It is probable that they represent *V. saturata* Swinh., of Hainan, of which we have no examples with which to compare them.

All the females are banded below, but two of them show signs of becoming grey all over.

103. *Pericrocotus speciosus fraterculus* Swinh.

Pericrocotus elegans Oustalet, p. 46.

1 ♂. Trang Bom, Cochin China. 31 May, 1918.

6 ♂, 3 ♀, 1 ♀ imm. Daban, 650 ft., S. Annam. 13-26 March, 1918.

3 ♂, 3 ♀. Dran, 3000 ft., S. Annam. 30 March-18 May, 1918.

"Iris, bill, and feet black."

Males. T. L. 190, 194, 197, 200, 197, 205, 202, 205, 198, 200; W. 93, 93, 95, 92, 93, 95, 95, 93, 95, 94; T. 97, 94, 95, 91, 92, 98, 93, 95, 96, 94 mm.

Females. T. L. 195, 200, 200, 190 (imm.), 210, 205, 205; W. 88, 95, 93, 91, 94, 92, 94; T. 87, 91, 95, 94, 96, 94, 98 mm.

This series shows a tendency to intergrade with *P. speciosus speciosus* in which both webs of the central tail-feathers are black, and also with *P. xanthogaster flammifer* in which the first three, not the first two primaries only, are spotted with scarlet on the outer web.

104. *Pericrocotus brevirostris* Hume.

Pericrocotus brevirostris Oustalet, p. 48.

1 ♂. Dran, 3000 ft., S. Annam. 9 May, 1918.

7 ♂, 5 ♀, 1 ♀ imm. Dalat, 5000 ft. S. Annam. 6 April-5 May, 1918.

1 ♂. Arbre Broyé, 5400 ft., S. Annam. 12 May, 1918.

1 ♂. Langbian Peaks, 6000 ft., S. Annam. 22 April, 1918.

"Iris, bill, and feet black."

Males. T. L. 182, 179, 195, 170, 182, 182, 176, 173, 185, 178; W. 83, 81, 85, 83, 84, 82, 82, 84, 83, 83; T. 93, 96, 99, 100, 100, 98, 97, 99, 94 mm.

Females. T. L. 178, 178, 182, 188, 185, 173 (imm.); W. 78, 78, 83, 80, 80, 83; T. 92, 96, 97, 94, 97, 100 mm.

The females of this series have the crown black, in two cases glossy; the light colour of the underparts of the body orange-yellow suffused with red. Four have the tails pinky red and one yellowish; the latter has the wing-patches yellow and the rump orange, while in the others the rump and the wing-patches are as the under surfaces of the tail, but more brilliant. Young birds are clear yellow without any tinge of red.

105. *Pericrocotus griseigularis* Gould.

Gyldenstolpe, Kungl. Sv. Vet.-Akad. Handl. lvi. no 2, 1916, p. 73.

1 ♂ ad., 1 ♀ ad., 1 ♀ imm. Dalat, 5000 ft., S. Annam. 7 April-3 May, 1918.

"Iris, bill, and feet black."

Male. T. L. 170; W. 83; T. 96 mm.

Females. T. L. 180, 190 (imm.); W. 80, 85; T. 96, 95 mm.

The young bird has the throat white, underparts lemon-yellow, wing-patch rather deeper yellow.

106. *Pericrocotus peregrinus* (Linn.).

Oustalet, p. 47.

1 ♂, 1 ♀. Tour Cham, Phanrang, S. Annam. 22 May, 1918.

"Iris dark, bill and feet black."

Male. T. L. —; W. 70 mm.

Female. T. L. 150; W. 66; T. (worn) 79 mm.

[To be continued.]